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BR 9015(11)

MONTANA DEPARTMENT OF TRANSPORTATION

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- Environmental Assessment -
and
Programmatic *Section 4(f)* Evaluation
for

BR 9015(11)
SWAN RIVER BRIDGE (West of Ferndale)
FLATHEAD COUNTY, MONTANA

(P.M.S. Control #1132)

Submitted Pursuant to
42 U.S.C. 4332(2)(c) *and* ***49 U.S.C. 303***
and
Section ***2-3-104, 75-1-201, M.C.A.***

by the

U. S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
Region 8

and the

MONTANA DEPARTMENT OF TRANSPORTATION
Environmental Services

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REVISED ENVIRONMENTAL ASSESSMENT
AND
PROGRAMMATIC *SECTION 4(f)* EVALUATION

for

BR 9015(11)
SWAN RIVER BRIDGE - WEST OF FERNDALE
(P.M.S. Control № 1132)

IN

FLATHEAD COUNTY, MONTANA

This document is prepared in conformance with the *Montana Environmental Policy Act* (*MEPA*) requirements and contains the information required for an Environmental Assessment under the provisions of ARM 18.2.237(2) and 18.2.239. It is also prepared in conformance with the *National Environmental Policy Act* (*NEPA*) requirements for an Environmental Assessment under 23 CFR 771.119.

Submitted pursuant to:

42 U.S.C. 4332(2)(C),
49 U.S.C. 303, and
Section 75-1-201, M.C.A.

by the

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

and the

MONTANA DEPARTMENT OF TRANSPORTATION

Submitted by: _____ Date: Aug 3, 1995
MONTANA DEPARTMENT OF TRANSPORTATION
Environmental Services

Reviewed & Approved
for Distribution: _____ Date: 8-3-95
Federal Highway Administration
Division Administrator

The following may be contacted for additional information concerning this document:

Joel M. Marshik, P.E.
Environmental Services Manager
MONTANA DEPARTMENT OF TRANSPORTATION
2701 Prospect Avenue, P.O. Box 201001
Helena, MT 59620-1001

Hank D. Honeywell, Administrator
Region #8, Montana Division
Federal Highway Administration
301 South Park, Drawer #10056
Helena, Montana 59626-0056

ABSTRACT

This revised Environmental Assessment explores the environmental consequences of improving a river crossing. Specifically, the proposed improvement lies on a paved county road over the Swan River approximately two miles east of Bigfork in Flathead County, Montana. Project BR 9015 (11) proposes to either replace or rehabilitate the existing 83-year old truss-type bridge **or** place an additional bridge upstream of the existing one. As of the date this document's circulation, it is unknown whether the existing structure will be replaced.

WHY A REVISED ENVIRONMENTAL ASSESSMENT IS NECESSARY

This revision is necessary due to the recent listing of the bridge on the NATIONAL REGISTER OF HISTORIC PLACES (NRHP). Although the original Environmental Assessment (EA) identified no significant impacts by any of the previous alternatives, and the FLATHEAD COUNTY Commissioners selected Alternate D as their preferred alternative; the amount of public concern expressed for preserving the existing bridge warranted further investigation. This led to a design modification for Alternative D and a new proposed design, Alternative E. Alternative E is a 290 ft. structure upstream of the existing crossing. This alternate allows the truss bridge to remain in-place if (a) party/ies can be found to assume ownership of the old structure. The FLATHEAD COUNTY Commissioners adopted Alternative E as their "preferred" alternate on April 10, 1995.

This revision also provides new or revised information that was not included in the original EA circulated in December, 1993. After this Revised EA has been reviewed and approved for distribution by the U.S. DEPARTMENT OF TRANSPORTATION's Federal Highway Administration (FHWA), another public hearing will be held. There will be a forty-five (45)-day comment period for the Revised EA once it is made available to the public. After the comment period expires, all comments received regarding the Revised EA including those made at the public hearing will be reviewed. A Finding of No Significant Impacts (FoNSI) may be issued after the comment review, if appropriate.

HISTORIC DESIGNATION OF EXISTING ("Carney Rapids") BRIDGE

In July, 1994 the existing bridge was listed on the NRHP for its unique design and historic value. Therefore, a "Nationwide" Programmatic *Section 4(f)* Evaluation is required to comply with *Section 4(f)* of the *U.S. DEPARTMENT OF TRANSPORTATION Act* (**49 U.S.C. 303**). This states (in part) that:

> "*The*" (Federal Highway) "*Administration may not approve the use of land from a significantly publicly owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that:*
>
> *(i) There is no feasible and prudent alternative to the use of land from the property; and*
>
> *(ii) The action includes all possible planning to minimize harm to the property resulting from such use.*"

(HISTORIC DESIGNATION - conclusion:)

Attached as part of Appendix G is a copy of the approved Programmatic *Section 4(f)* Evaluation demonstrating that the FHWA, MONTANA DEPARTMENT OF TRANSPORTATION (MDT), and Flathead County have met the above criteria. This programmatic agreement was initially developed by the FHWA in mid-1983, and has been adopted by MDT.

DISPOSITION OF THE EXISTING STRUCTURE

As part of this document, the following notice officially makes available the now historic "Carney Rapids" Bridge to any willing and responsible owners. The owner(s) would be responsible for all aspects of ownership including, but not limited to, liability insurance, and proper handling and disposal of the lead-based paint. If no owner(s) are found within 45 days after this document is made available for public comment, the bridge will then be demolished under either Modified Alternative D or Alternative E.

The Flathead County Board of Commissioners notified MDT on April 25, 1995 regarding their position with respect to the disposition of the existing bridge:

> *"Once the new bridge is in-place and operational, Flathead County does not, in any way, wish to retain any liability and if no one else is inclined to accept ownership and the accompanying liability, it is our position that the old bridge should be totally removed."*

☞ NOTICE ☜

THE FLATHEAD COUNTY COMMISSION AND THE MONTANA DEPARTMENT OF TRANSPORTATION ARE SEEKING PARTIES OR INDIVIDUALS INTERESTED IN ADOPTING THE "Carney Rapids" BRIDGE WHICH CROSSES THE SWAN RIVER ONE MILE WEST OF FERNDALE.

OPTIONS FOR CONSTRUCTION OF A NEW BRIDGE DESIGNED TO CARRY THE HEAVIER LOADS ASSOCIATED WITH MODERN EQUIPMENT AND EMERGENCY VEHICLES ARE BEING CONSIDERED. ONCE A DETERMINATION HAS BEEN MADE ON A NEW BRIDGE, THE STATUS OF THE OLD BRIDGE WILL BE FINALIZED BY THE COUNTY COMMISSION.

THE NEW OWNER WILL BE GRANTED $22,000 TO MAINTAIN THE BRIDGE IN-PLACE OR MOVE IT TO A NEW LOCATION. THE AMOUNT OF THE GRANT IS BASED ON THE COSTS OF REMOVING THE BRIDGE. FLATHEAD COUNTY WANTS THE BRIDGE TO BE REMOVED BECAUSE OF LIABILITY CONCERNS IF NO ONE IS WILLING TO ADOPT THE BRIDGE.

FOR MORE INFORMATION REGARDING THE BRIDGE MAINTENANCE AND/OR REMOVAL REQUIREMENTS, EXPRESSING ADOPTION INTEREST OR OTHER QUESTIONS CONTACT THE FLATHEAD COUNTY COMMISSION, 800 S MAIN, KALISPELL, MT 59901, (406) 758-5503 OR JOEL MARSHIK, DEPARTMENT OF TRANSPORTATION, PO BOX 201001, HELENA, MT 59620-1001; PHONE (406) 444-7632. FOR THE HEARING-IMPAIRED, THE TDD NUMBER IS (406) 444-7696.

Table I.
Summary of Alternatives and Impacts

Alternative	Horizontal Alignment	Old Bridge Remains In Place?	Historic Integrity Compromised?	Amount of Fill Placed Below Ordinary Highwater elev.(c.yd.)	Amount of Wetland Impact (ac.)	Private Land Affected on South Side of the River (ac.)	Tree Removal	Load Rating	Safety[1]	Expected Service Life (Years)	Cost
A - "No-Build"	no change	yes	no	none	none	none	none	0 tons	bad	0	$ 0
B - MDT Rehabilitation	no change	yes	no	none	none	none	none	20 tons	poor	15 - 25	$ 660,000.[2]
B - Muth's Rehabilitation	no change	yes[3]	yes	some[4]	none	none	none	36 tons	fair[5]	50	$ 620,000.
C - New 163 ft. Bridge	over existing	no	yes	3630 c.yd.	0.35 ac.	none	none	36 tons	fair	75 - 100	$ 500,000.
D - New 290 ft. Bridge	15° curve over existing align.	no	yes	463 c.yd.	0.10 ac.	0.37 ac.	some	36 tons	better	75 - 100	$ 710,000.
E - New 290 ft. Bridge	tangent 30 ft. upstream	yes[6]	no[7]	463 c.yd.	0.11 ac.	0.37 ac.	more	36 tons	better	75 - 100	$ 710,000.

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1 Safety based on design speed (which is related to radius/sharpness of approach curves), number of driving lanes and lane width.

2 The original estimate of $463,000 did not include $33,000 for mobilization, $15,000 for structural steel, $5,000 for barrier rail and $160,000 for earthquake retrofit.

3 Although Muth's rehabilitation design alters the historic design ("Criteria A"), the bridge would remain on the NRHP based on its historic value ("Criteria C").

4 Muth's design may require refurbishment and extension of the two bridge piers.

5 The Muth rehab design features a concrete deck as well as a sidewalk for pedestrian and bicycle use.

6 If a new owner can be found to assume liability for the existing bridge it will remain in place. If an owner cannot be found, the old bridge will be removed.

7 By itself, Alternate E does not threaten the historic integrity of the old "Carney Rapids Bridge" because it will be upstream. However, if a new owner cannot be found, the old bridge will be demolished.

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I. DESCRIPTION OF THE PROPOSED ACTION

A. Location of this Proposed Improvement

The MONTANA DEPARTMENT OF TRANSPORTATION (MDT), in cooperation with Flathead County, is planning to improve transportation on an "off-system" County road over the Swan River near Ferndale, Montana. This Swan River Bridge is locally known as the "Carney Rapids" Bridge. It is located approximately three-quarters of a mile west-northwesterly of Ferndale, and two miles easterly of Bigfork, respectively. This proposed project is located entirely within Flathead County in the East ½ of the SouthEast ¼ of Section 32 in Township - 27 - North, Range - 19 - West, M.P.M. Its **Project Location Map** is shown in **Figure 1**.

B. Options for this Proposed Project

This proposed action consists of improving the existing crossing for greater safety and adherence to highway standards with either a new structure, or by rehabilitating the existing bridge. The existing bridge carries one lane of traffic on an approximately 16.5 ft. wide wooden deck supported by two concrete piers, timber approach spans, and a steel-framed through-truss.

The rehabilitation (or "rehab") option includes new decking, removal of existing lead paint, repainting, replacing several truss members, installing new guardrail and seismic retrofit. The bridge would not be widened as part of the rehabilitation. Another "rehab" option was proposed by an engineering consultant representing a local citizens preservation group. This alternative would incorporate the existing through-trusses, suspension cable for additional support, a new steel-reinforced concrete deck, and earthquake retrofit.

The proposed new bridge options involve 26± ft. wide pre-stressed concrete bridges. "Free-board" clearance (*i.e.*: the vertical distance between the bottom of the lowest beam to the high water elevation of the Swan River) for recreational use will be maintained. Either of the new bridge alternatives will include the following additional improvements which are not part of the "rehab" alternatives:

- ✓ the bridge deck will have two lanes, each 12 ft. wide;
- ✓ the new horizontal alignment includes safety improvements that flatten the approach curves thereby increasing the design speed to 30 or 32 MPH;
- ✓ the proposed new bridge meets all design standards for "off-system" bridges; and
- ✓ the trusses containing lead paint may be removed from the river environment if the old bridge is moved or demolished.

The horizontal alignment of the new structure will either curve over the existing alignment (Modified Alternative D), or be moved slightly upstream (Alternative E.) The design speeds are 32 MPH and 30 MPH, respectively, for these alternatives.

C. Funding

It is MDT's responsibility to inspect all publicly-owned bridges. This includes those bridges on interstate, primary and secondary routes, as well as "off-system" bridges that are owned by the counties, such as this one. Some county-owned bridges are designed and built by MDT (or contractors employed by same), as is intended for this proposed project.

(**I.C. Funding** - conclusion:)

MDT receives limited funding for bridges from the Federal Highway Trust Fund. To distribute these funds equitably, an allocation program is used that rates the bridge's ability to meet the transportation needs of the public based on **functional** and **structural** adequacy. A list is sent to the counties showing which bridges are eligible to receive these off-system funds. The counties then assign priorities based on their local plans and needs. The counties nominate bridges for improvement/replacement based on their local planning priorities.

This rating by functional and structural adequacy is called a *Sufficiency Rating* (SR). New bridges usually have sufficiency ratings over 95. When a bridge's rating is less than 80, it is eligible for rehabilitation funding if it is **functionally obsolete and/or structurally deficient**. If the sufficiency rating is less than 50, it can be nominated for replacement. Recent sufficiency ratings for the "Carney Rapids" bridge ranged from 20 to zero (during the six-month period in 1994 when the bridge was temporarily closed.)

Figure 1 - Project Location Map

II. PURPOSE AND NEED

A. Description of the Existing Bridge and Location

This bridge was originally composed of two, 16 ft. timber spans on its northerly approach; a 152 ft. steel truss supported by concrete piers at each end; and one, 16 ft. timber span on the southerly approach. The total length of this bridge as constructed was 200 ft. according to the "as-built" plans of 1911 for the "Carney Rapids Bridge". Currently, it has two timber approach spans on the northerly end, one of 23.0 ft. in length and 24 ft.-3 in. for the other; the same 152 ft. steel truss; and two timber approach spans on the southerly end, one with a 21 ft.-2 in. span and the other with a 20 ft.-9 in. span. The total length of the present bridge is just over 241 ft. (or 241 ft.- 2 in.). Its "as-built" timber deck width remains at 16.5 ft., and the vertical clearance between the deck and top beams connecting the steel trusses is 19.5 ft.

This proposed Swan River bridge project is located in Flathead County, approximately one mile west-northwesterly of Ferndale, (and two miles easterly of Bigfork,) Montana. The surrounding area is a mix of coniferous forest and pasture land, that ranges from flat to rugged terrain used primarily for forestry, agriculture, and recreation. Residential, recreational, and logging roads are scattered throughout the area.

Figure 2, following, is from a topographic map of the general area. It shows that the bridge is located on the Swan River just as it begins to enter a narrow valley above the Big Fork Dam. This local area is an optimum location for the existing bridge due to:

1) downstream, channel width and water depth increases rapidly towards the dam; and
2) the upstream area is a broad valley established by the meandering river, and is prone to channel changes.

On May 13, 1994, Flathead County officials closed the bridge after a heavy load crossed it, causing some main support members to fail. The County replaced a stringer, reinforced other structural members, and placed some new decking on the bridge. With these reinforcements, the bridge was reopened six months later under a 3-ton load limit and 8.4± ft. height restriction. The existing bridge may be closed again, depending on the condition of the bridge deck.

B. Road Use

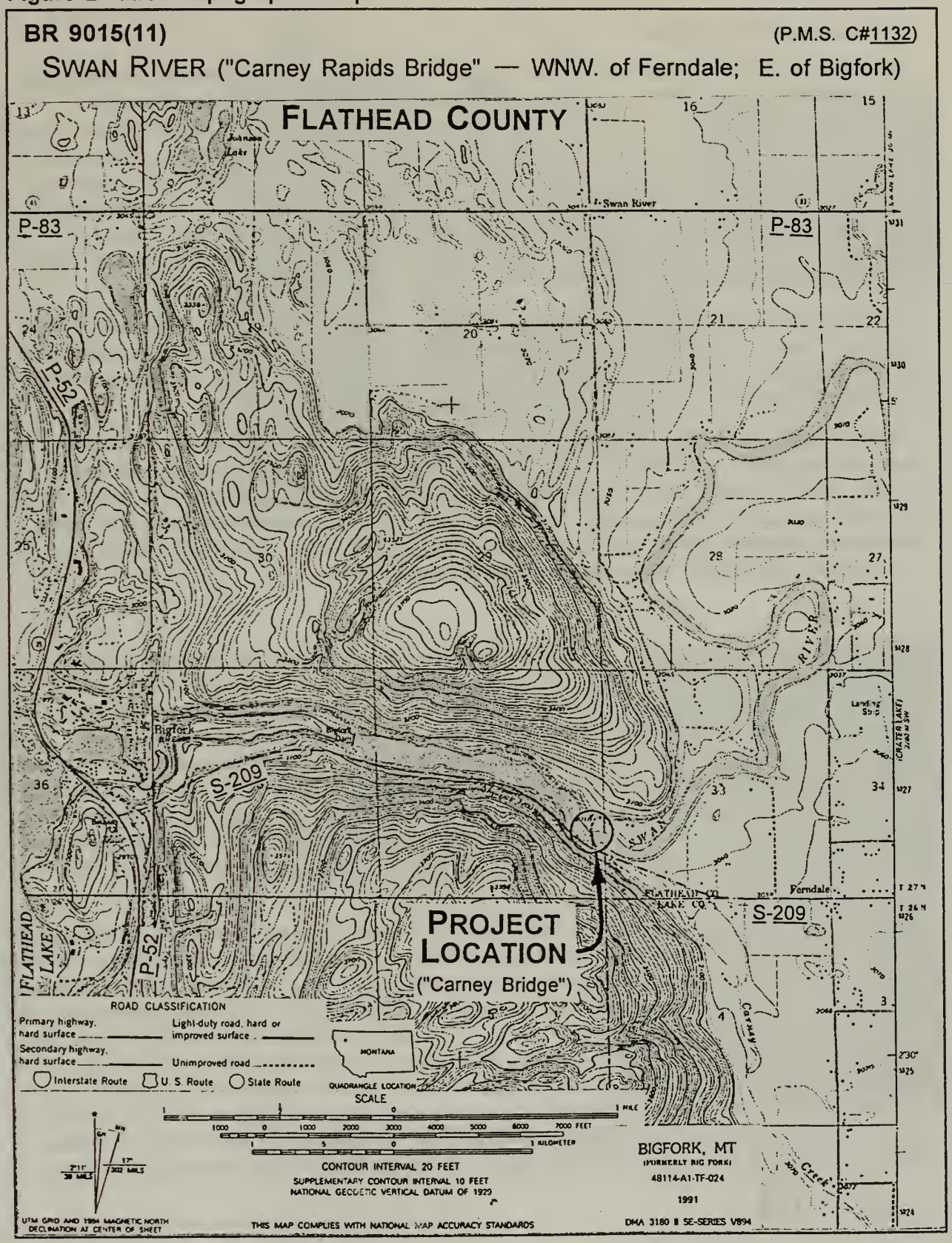
The "Carney Rapids" Bridge provides one of two crossings over the Swan River for pedestrian and vehicular traffic in Flathead County above the Big Fork Dam. The other is on Montana Secondary highway Nº 209, about 1 mile easterly of Ferndale. This "Carney Rapids" bridge is on the most direct route between Ferndale and the Swan River community - Echo Lake area. This is also part of a "feeder" route between south-central Flathead County and northeasterly Lake County.

The nearest major highway transportation routes are:

- MT Highway Nº 35 (Primary route #52) between Polson and Kalispell along the easterly shore of Flathead Lake through Bigfork;
- MT 83 (P-83) between Clearwater J$^{ct.}$ (MT 200) and MT 35 through the Swan River Valley; and
- MT Secondary #209 connecting MT 35 with MT 83 from Bigfork through Ferndale.

There is also a gravel county road parallel to S-209 on the northerly (right) bank of the Swan River easterly from Bigfork. This route is frequently used by joggers and bicyclists.

Figure 2 - Area Topographic Map



C. Current Deficiencies

The "Carney Rapids" Bridge is an 82-year-old steel truss bridge. It is **functionally obsolete *and* structurally deficient** having a sufficiency rating (SR) of 21.5 (see copy of the *STRUCTURE INVENTORY AND APPRAISAL* form of 10-Jan-95 in Appendix G). The existing bridge had a sufficiency rating of zero (0) when it was closed for six months in 1994 after being damaged by a heavy load. Its deck, wearing surface, railing, bearing devices, paint, piers, caps, and bracing are in need of serious repair. Timber members in the approach spans are also rotting. Due to the deteriorating structure, the bridge has a posted safety load of 3 tons. The four photos on pages 7 and 8, respectively, show the local environment as well as the dilapidated condition of the present bridge (additional photos are under Appendices F & G).

The standard load-rating for bridges with similar traffic in this area is 36 tons. Due to the current low safety rating, fire trucks, school buses, garbage and septic trucks, and other large loads cannot cross this bridge. Therefore, the safety and property of local residents are at risk. Furthermore, operating costs for local services (such as TCI Cable and UPS) have increased.

The existing bridge is functionally obsolete with its current 3-ton load limit when it actually warrants a 36-ton load limit. Additionally, the existing structure is 16.5± ft. wide with only one lane of traffic. MDT's standard minimum width for a two-lane bridge is 24 feet (which uses two 12 ft. lanes of motor vehicle traffic). Therefore, as set forth by MDT's Bridge Management Program criteria for off-system bridge funding, this crossing is eligible (and has been nominated by the County) for improvement, including rehabilitation or replacement.

D. Traffic

A formal Traffic Analysis across the existing bridge had not been done until recently. County personnel originally estimated 150 to 200 vehicles crossings per day. Historical records for MT 83 and MT 35 showed annual traffic increases of eight percent. The original traffic growth rate for the bridge was assumed to be between five and eight percent, based on the bridge's proximity to highways 83 and 35. The traffic projections estimated between 300 and 400 crossings per day in the year 2013, the "design year". Before the bridge was temporarily closed in Spring, 1994, Flathead County officials counted 837 vehicles that crossed the bridge in a 24-hour period. This count showed more than a four-fold increase in the original traffic estimate. It also revealed that current traffic levels crossing the bridge are twice those predicted for the "design year" of 2013. This also amplifies the critical need for an improvement at this location.

Currently, the steep grade and sharp curves of the bridge approaches are hazardous, especially in the winter. The proposed new bridge alternatives include corrections for the poor horizontal and vertical alignments. As a result of the sharply-curved approaches to the bridge, speeding across the bridge is discouraged. However, some wintertime accidents have occurred due to the steep (greater than 5%) grade approaching from Ferndale. Over the last five years, two single-vehicle accidents have been recorded in the vicinity, although neither resulted in serious injury. There are not any current vehicle-related accident problems at this location associated with the present bridge, but the existing structure poses a serious hazard. Additionally, driver sight-distances at this location are severely restricted both by the poor approach alignments and the existing bridge. These lead to conditions in which it is difficult for drivers to observe traffic, pedestrians, and/or obstructions in the roadway.

Photo 1 - Looking northerly from the southeasterly end of the existing "Carney Rapids" bridge on 19-Apr-93. Note deteriorated condition of pier in the left-foreground (in need of extensive repairs).

Photo 2 - Looking northerly from the southwesterly end of the existing "Carney Rapids" bridge on 19-Apr-93. Note deteriorated condition of pier in the right-foreground (in need of extensive repairs).

Photo 3 - Looking easterly (upstream) on the Swan River from the northerly approach to the existing "Carney Rapids" bridge on 19-Apr-93. The Swan Range is visible on the background on clear days.

Photo 4 - Looking westerly (downstream) on the Swan River from the northerly approach to the "Carney Rapids" bridge on 19-Apr-93.

III. ALTERNATIVES CONSIDERED

A. Introduction

Montana highway and bridge projects are developed to meet or exceed the minimum American Association of State Highway and Transportation Officials (AASHTO) guidelines as well as MDT's design standards. Considering the many major deficiencies of the existing bridge, substantial upgrading is required to meet these guidelines and standards.

AASHTO recommended minimum roadway design standard is two, 12-ft. lanes and a design speed of 30 MPH for the traffic projected in the design year 2013. Two types of "build" alternatives that correct or minimize the operational and structural deficiencies of the crossing have been evaluated and are presented in this document. These two types are the rehabilitation and replacement alternatives, and included in the discussions is the "No-build" alternative. The alternatives considered in the original Environmental Assessment were:

(A) The "No-Build";

(B) Rehabilitating the existing structure;

(C) Replace the existing bridge with a new 163 ft. bridge; and

(D) Replace the existing bridge with a new 290 ft. bridge.

Additional information on comparison of alternatives is contained in **Table 1** on page iv.

Due to public comment, the analysis of these alternatives has been amended as follows:

- Alternate C (163 ft. bridge) is no longer being considered as a viable alternative. Public opposition and the concerns of the MONTANA DEPARTMENT OF FISH, WILDLIFE & PARKS (MDFW&P) regarding the placing of 3630 cubic yards of fill in the Swan River ended further consideration of this Alternate.
- Alternate D (290 ft. bridge) has been slightly modified and will now be referred to as "Modified Alternate D". The greatest change is that the bridge will not have a tangent crossing of (*i.e.*: "straight across") the river, but rather will be on a curve.
- Alternate E is a new proposal under consideration that may make it possible to leave the existing bridge in place (if a new owner is found). This alternate would be a tangent crossing slightly upstream of the existing crossing, and the old bridge would not have to be demolished. Another advantage of this proposal is that traffic could be maintained on the old bridge while the new bridge is under construction.

B. The Alternatives

1. Alternative A - "No-Build"
   The "No-Build" alternative (also known as the "do nothing" alternative) involves taking no action. This alternate leaves the existing "Carney Rapids" bridge in-place with only minimal maintenance and repairs as-needed (and economically feasible). This alternate has essentially been in effect since the FHWA approved this proposed project for engineering studies in mid-August, 1987. The dilapidated condition of the existing bridge would not be improved. Another temporary, or even a permanent closure of the existing bridge due to its current 3-ton limit being exceeded is likely to occur under this alternate.

   This "No-Build" alternative also provides a valid basis to establish the Purpose and Need for the proposed improvement (see part **II** on pages 4 & 6, preceding). That demonstrated Alternative A does <u>not</u> meet the traveling public's needs in terms of safety and service.

(III.B.1. Alternative A - "No-Build" - conclusion:)

"Pros"
This alternative has no direct costs and no new impacts would be imposed on the surrounding land and water. There would be no loss of stream habitats, and no change in the visual opportunities of or from the bridge. However, these are assumptions based on no sudden, catastrophic collapse of the existing structure (such as may occur under a large truck with a gross vehicle weight far in excess of the current 3-ton limit attempting to use this bridge).

"Cons"
This "do nothing" alternative does not satisfy the purpose and need of the proposed improvements. The existing 82-year-old structure is in disrepair; it does not meet safety requirements or correct the poor driver sight distances, and is too narrow to provide for two lanes of traffic. The 3-ton load limit restricts trucks carrying otherwise legal-weight loads from crossing the Swan River at this location. Flathead County would also continue to bear the liability and/or maintenance of a deteriorating facility. This is most likely to become an increasingly burdensome problem. If the bridge collapsed, human life could be lost and the Big Fork Dam (approximately one mile downstream) would be at risk from floating debris. Although lead-based paint would still be on the bridge, it would not be considered a hazardous waste (*vis.*: the lead-based paint is not a hazardous waste until it's removed).

Cost[8] of Alternative A: $0.00

2.a. Alternative B-MDT Rehabilitation

Rehabilitating the existing bridge would involve salvaging usable parts from the existing structure while installing new members and pieces where needed. The original structure would be left in-place while under repair. Rehabilitating old bridges is a current trend in the United States as the "infrastructure" (*i.e.*: bridges, roads, buildings, etc.) ages. Historic bridges are symbols of times past, serving as reminders to the development of surrounding land and communities. Also, the construction costs and environmental impacts of rehabilitation are usually either less than or equal to a full replacement.

"Pros"
This alternative uses the existing bridge length, alignment, and truss-configuration for the main spans. It would include replacing the timber structures on the approach spans, stringers, and decking. The load rating would increase to 20 tons, and the aesthetic value of the historic bridge would not be adversely affected.

Comments were forwarded to MDT favoring this alternative following a public meeting held in Bigfork on January 11, 1993. These comments reflected the opinion that the intrinsic aesthetic value of the existing structure adds to the scenic features of this area. One comment suggested that the existing bridge is a "landmark" even though (at that time) the structure did not qualify as a Historic Bridge under the criteria for listing on the National Register of Historic Places (NRHP)[9].

"Cons"
This alternative would not reduce the steep vertical grade on the southeasterly approach (from Ferndale), or provide two traffic lanes. Also, the sharp curves on both approaches may or may not be reduced. The poor driver sight distances at this location will not be corrected. The rehabilitated bridge would not meet AASHTO recommendations and/or MDT design standards.

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[8] These "Cost" figures are for construction, Right-of-Way/easement acquisition, and related items.

[9] In July, 1994, local residents succeeded with a petition to get the bridge listed in the NRHP.

The majority of the bridge would still be over 82 years old, and structural considerations (such as pin connections and pier foundations) would need to be investigated. At best, rehabilitation would extend the service life of the bridge 25 years, after which it is unlikely that it could be salvaged. Furthermore, the existing bridge is covered with a lead-based paint, which would need to be removed. The added expense to clean the existing bridge free of this paint is at least $95,000.

Estimated Cost of Alternative B-MDT: $463,000

Unresolved Issues

A complete scope-of-work and a total cost estimate of a rehabilitation have not been made. A sub-surface investigation of the pier footings and foundations would need to be done if rehabilitation is used, and such investigations are costly. Historically, the substructure comprises about one-half of the total cost of a new bridge's construction. With the new posting of a 20-ton limit on the rehabilitation, costs associated with upgrading the substructure may become exorbitant. Also unresolved is the matter of retaining the current approaches' sharp curves. Revising the approaches' alignment will also need further engineering study if this (or the following "B-Muth") alternative is selected.

The lead in the existing bridge's paint is a toxic substance. The removal of lead-based paint is regulated by the U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA), the Federal Occupational Safety & Health Administration (OSHA), and the MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ, formerly the MONTANA DEPARTMENT OF HEALTH & ENVIRONMENTAL SCIENCES/MDH&ES). These require a complete understanding of lead-based paint removal procedures. Worker health and environmental issues, including lead-based (or lead) paint disposal, are outside the scope of this document. For a more complete understanding of these and related topics, a good resource is Kenneth A. Trimber's Industrial Lead Paint Removal Handbook, available from the Steel Structures Painting Council.

The removal of lead paint is very detailed, time-consuming, and expensive. With the many volumes of regulations and procedures, little room is left for error. Before the bridge is repainted with an approved coating, the steel must be cleaned free of the lead-based paint which requires sand-blasting or blast-beading. The residue must be 100% contained. Also, the contractor and MDT (and, in this case, the County owning this bridge) must take measures to test the soils, water table, and the river. A procedure for the workers (including respiratory surveillance, personal hygiene training, and other medical surveillance programs) to monitor levels of lead before the project begins and again upon completion must be approved by the regulatory agencies prior to construction. Once the lead paint is removed, it then must be sealed in special containers and shipped to an EPA-permitted treatment and disposal facility (none of which currently exist in Montana). The costs and risks to the environment also increase rapidly. The added expense to clean the existing bridge free of the lead paint is at least $95,000.

In the event that this alternative is not chosen, the old bridge will still be coated with the lead-based paint. Disposal of the bridge would not require that this paint be removed as it would remain part of the discarded structural members. The removed bridge will become the property of either the contractor, or a party responsible for preserving it. Either of these entities would then be accountable for the removal/disposal of this paint.

2.b. Alternative B-Muth - Muth's Rehabilitation Option

Interested community members hired a private consulting engineer (a Mr. Muth) to investigate a rehabilitation of the existing structure. Muth's proposal uses the existing through-trusses, adds suspension cables for additional support, and a new steel-reinforced concrete deck. It also includes an earthquake "retrofit" (as required by the FHWA).

"Pros"
According to Mr. Muth, the bridge would last another 50 years and have a posted 36-ton load limit. This alternative would allow the "Carney Rapids" Bridge to remain eligible for listing on the NRHP for its historic nature (under "criteria C"). Other amenities include widening for a sidewalk and guardrail to enhance pedestrian and bicycle safety.

"Cons"
The sharp approach curves, single-lane crossing, narrow width and height restrictions would not be changed. No substantial improvements to the poor driver sight distances would occur. The lead paint would have to be removed as described under part **B.**2.a., previous, adding approximately $95,000 to this option. The design, when completed, may radically alter the existing appearance and cause the bridge to be ineligible for the NRHP. If this alternative is selected, the STATE HISTORIC PRESERVATION OFFICE (SHPO) and the Advisory Council for Historic Preservation (ACHP) will need to review the final design to determine continuing the bridge's eligibility on the NRHP.

Estimated Cost of Alternative B-Muth: $620,000

3. Alternative C - build a new 163 ft. bridge
This alternative involves a total replacement of the substructure and superstructure with a new 163 ft. bridge, as well as realigning the approaches for safer curves. A new bridge will use pre-stressed concrete girders with a reinforced concrete deck, and have a 75 to 100 year service life requiring little maintenance.

"Pros"
The deck elevation would be raised approximately two feet higher than present. This also slightly decreases the grade on the southerly approach from S-209. The crossing would safely carry a 36 ton load, and uses two 12-ft. traffic lanes. The horizontal alignment shifts 10± ft. downstream and provides for safer (flatter) approach curves. Driver sight distances improve as a result of the proposed alignment changes and wider bridge deck. This alternative meets or exceeds AASHTO recommendations and MDT Design Standards.

Studies of the Swan River in relationship to the Big Fork Dam 1± mile downstream indicate that the additional encroachment into the river from the new bridge approaches will have a minimal effect on velocities and backwater elevations. From a hydraulic standpoint, changes in the velocities and flood stage elevations are insignificant.

"Cons"
A disadvantage of this alternative is the approaches encroaches into the Swan River and adversely affects some fish habitats. The total proposed bridge length of 163 ft. requires 3630 cubic yards of embankment material for the new abutments. The existing "Carney Rapids" bridge length is 241 ft. (including approach spans).

The MDFW&P initially approved the Alternative C concept as proposed with stipulations for mitigation. Mutually agreed-on mitigation will be coordinated with the MDFW&P when MDT applies for the *Montana Fish & Wildlife Act*'s (**87-5-501** through **509 M.C.A.**, inclusive) ***124SPA* Stream Protection Permit** on this proposed project.

However, Alternative C is no longer being considered by Flathead County and MDT due to the concern expressed at the public meeting held in Bigfork in February, 1994. Also, some trees screening the man-made structures from the view of recreationists and local area residents would be removed.

Estimated Cost of Alternative C: $500,000

4.a. Alternative D - build a new 290 ft. bridge

This alternative involves a 290-ft. bridge on a tangent over the present structure's alignment. It will be 49± ft. longer than the existing bridge with approach spans.

"Pros"

This alternative offers the advantages found in Alternative C, and requires less fill material to be placed in the river. Secondly, the longer bridge would not affect the river's water levels and velocities at flood stages as compared to the existing structure.

"Cons"

The longer bridge costs approximately $200,000 more than Alternative C, requires removing the existing bridge, and eliminates the visual tree screen. The longer spans require deeper beams which may result in more visual impact. This also requires higher bridge deck elevation to maintain the existing "freeboard" between the bottom of the superstructure and the river. Both of these effects may make the new bridge appear to encroach upon the surrounding local scenery.

Estimated Cost of Alternative D: $690,000

4.b. "Modified" Alternative D

Alternative D has been revised since circulating the first Environmental Assessment (EA). The same approach alignments would be used with a slight increase in vertical alignment. However, the bridge would be on a 15° horizontal curve instead of a tangent over the present crossing. "Modified" Alternative D requires removal of the existing bridge prior to construction. The river access on the south (left) bank, upstream of the existing bridge, would be moved about 25 ft. upstream (easterly).

The horizontal alignment on the 15° curve would continue across the bridge with 0.04 ft./ft. superelevation, resulting in a 32 MPH design speed. The concrete construction will be the same as described previously. The steepest grade would be 3.26± % on the southerly approach. The approach roadway and bridge deck would both be 26 ft. wide, with the latter 2 to 3 ft. higher than the existing bridge. The fill slopes on the northerly approach were steepened from 4:1 to 2:1 to reduce total wetland impacts from 0.29± acres to 0.10± acres. The total new Right-of-Way and easement required on the southerly side of the proposed bridge is 0.72± acres. This alternative is shown on **Figure 5** in **Part VII** of this document.

The "freeboard" elevations will not be less than the existing clearances, so river recreationists will not have restrictions under the new bridge. This proposed alternative will have three piers and four spans. In effect, the curved alignment changes very little from that of the original proposed Alternative D. Adding a curve to the horizontal alignment increases safety by flattening the approach curves. The original Alternative D's estimate of $690,000 is only 3± % less than that of this "Modified" Alternative D.

"Pros"

An optimum feature of this alternative is that it has a design speed of 32 MPH, which is slightly higher than the other proposals being considered. Secondly, this alternative uses portions of the existing approach alignments and requires less earthwork. Also, fewer trees are removed if this alternative is selected. Driver sight distances are improved with safety enhanced for pedestrians and vehicles under this alternative.

"Cons"

The main shortcoming of this alternative is the new bridge requires removing the old structure prior to construction. Also, some trees need to be removed for the construction of the higher bridge approaches.

(III.B.4.b. "Modified" Alternative D - conclusion:)

This alternative also requires additional Right-of-Way and easement on the southerly side of the bridge. Wetland impacts of 0.10± acres also occur on the northerly side.

Estimated Cost for "Modified" Alternative D: $710,000

5. Alternative E

This Alternative E is a new alignment following the original EA's circulation in late 1993. Its alignment was suggested by FLATHEAD COUNTY officials, and is shown on **Figure 6** in **Part VII** of this document. Alternative E involves a new bridge upstream (easterly) of the present one, and allows that existing structure to remain in-place if a new owner (or owners) can be found. The river access easterly (upstream) of the present "Carney Rapids" bridge moves about 30 ft. easterly (upstream) and remains on the same southerly (left) bank.

This alternate's horizontal alignment features two 19° horizontal curves (with a design speed of 30 MPH) on both ends of the bridge approaches. The 0.04 ft./ft. superelevation on each of the approach curves is retained, although the crossing uses a tangent (straight) across the river. The maximum grade (4.01± %) is on the southerly approach to the bridge. The bridge deck is two to three feet higher than the existing bridge deck. This alternative also involves three piers in the river with a four-span bridge including approach spans. The beams and stringers are also pre-stressed concrete with a reinforced concrete deck. The approach roadway and bridge deck widths are both 26 ft. (as in Alternative D's versions). The fill slopes on the north side were steepened from 4:1 to 2:1 to reduce total wetland impacts from 0.25± acres to 0.11± acres. The total new Right-of-Way and easement area for this proposed Alternative E on its southerly side is about 0.65 acres.

"Pros"

The main attraction of this alternative is moving the new crossing upstream allows traffic to be maintained on the existing bridge during construction. However, this use is contingent upon the present bridge remaining open with its current load limits. Safety improvements (approach alignment and driver sight distances) are similar to the preceding "build" alternatives.

"Cons"

This alternative would impact approximately 0.11 acres of wetlands on the northeasterly side of the northern approach. These impacts would be either mitigated on-site, or entered into a "Wetlands Accounting Ledger" (ref.: Part **IV.C.3** Wetlands on pages 20 - 21 of this document). Also, more trees would be removed on the southerly side of the bridge to build its new approach.

Estimated Cost for Alternative E: $710,000

IV. SOCIAL, ECONOMIC, AND ENVIRONMENTAL IMPACTS

A review of the social, economic, and environmental factors and resources known to be affected by this proposed action involved cooperation between Federal agencies, MDT and other state agencies, Flathead County officials, and information from the general public. Urban impacts were not found in the study area due to the rural setting of this proposed project. Only those impacts with a reasonable possibility for individual or cumulative impacts are assessed under this section.

A. Introduction

One of the issues concerning this proposed project is aesthetics regarding both the appearance of the existing "Carney Rapids" bridge, and its relationship to the local landscape. For the last 82 years, the present "Carney Rapids" bridge has been at this location. This man-made structure appears to "blend-in" with the natural environment as most of the local populace remembers its being there. Arguably, the *possibility* of change is the source of opposition and controversy rather than the *nature* of the change. If a new bridge alternative is chosen, its pre-stressed concrete appearance will replace the aesthetics of the existing wood deck and steel truss version.

Another related concern is that an improved structure will lead to development in the area. Local homeowners and other concerned individuals perceive that, due to easier access, their area will automatically be developed, threatening their space and privacy. This issue begs the question: Does the improvement of a transportation facility foster development, or follow it? The Bigfork area, along with most of the Flathead Valley, has been experiencing rapid growth since the 1970's. The more desirable an area is (*i.e.*: the more it has to offer), the more likely people will choose to live there. Areas that experience increases in population also have greater demands on its transportation facilities. MDT's responsibility includes providing safe, efficient roads and bridges that meet these increasing transportation demands. However, MDT has no statutory authority over an area's development, nor dictates patterns of growth. It does, however, engineer facilities to meet change or growth in the most reasonable and practical way. Landowners have control over the development of their own land, as regulated by municipal and/ or county governments to control growth trends through planning and zoning practices.

A third issue on this proposed project concerns the fill placed in the river for Alternative C (see item **III.B.**3. on page 12, previous). About 3,630 cubic yards of fill would be required for the approaches to the new bridge. This new embankment would reduce both the amount and quality of fishery habitat in its immediate area of the Swan River.

B. Social & Economic Impacts

This proposed action will not have any significant impact on the location, distribution, density or growth rate of the area's population. When completed, this proposed project's "build" alternatives will result in the generation of additional vehicular movement. Passenger cars and light trucks/utility vehicles may continue to use the existing structure under Alternative A. However, as stated under item **III.B.**1., previous, the existing "Carney Rapids Bridge" could be closed, again. Such a closure will result in some permanent disruptions to travel patterns and extended travel by emergency services (law-enforcement vehicles, ambulances) between the Swan River communities and Ferndale/Bigfork areas. Mid-sized trucks and emergency services (*i.e.*: fire trucks) along with service vehicles (school buses, snowplows, garbage/septic service trucks, utility vehicles, etc.) will be able to cross the Swan River at this site under Alternative B-MDT.

Heavier trucks (up to 36 tons) will be able to use the new bridge under Alternatives B-Muth[10] through E, inclusive. This will result in some changes to present vehicular traffic patterns. However, these proposed "build" alternatives will not affect the community in terms of disruptions to its cohesion (physically dividing neighborhoods and/or separating residents from community facilities, etc.). Overall, this proposed action's "build" alternatives will be an improvement to the public road and bridge system in the Bigfork-Ferndale-Swan River communities' area. It will not have any long-term beneficial (see item **IV.D.** on page 27, following) or adverse effects on the local and/or regional economies.

1. Safety & Efficiency

This proposed project's "build" alternatives provide a safer and more efficient facility for all road users. However, both Alternatives B-MDT and B-Muth do not correct the poor driver sight-distance problems on the approaches or the existing bridge. Construction of a wider bridge with Alternatives C - E, inclusive, allows traffic and pedestrians to move more quickly and safely over the Swan River. The new bridge alternatives also will improve driver sight distances both on the structure and its approaches.

There will be no effect on recreation as the river access is perpetuated under all proposed alternatives. The "freeboard" (see item **III.B.**4.a. on page 13, previous) clearance does not change noticeably under any of the proposed new bridge alternatives. A new bridge with a wider roadway (on both the deck and approaches) provides better access to residents and recreationists traveling in and out of the area. The two-lane roadway in Alternatives C - E, inclusive, improves safety for bicycle and pedestrian travel. Overall, this proposed project's "build" alternatives provides a dependable, all-year recreational and commuter travel to the area. Its four new bridge alternatives also improve safety for pedestrians and vehicles with a wider, two-lane roadway and greater driver sight distances.

An upgraded or new bridge also provides for substantial improvement in public safety. Closing the present bridge under Alternative A results in a longer time for emergency responses to fires, accidents, and/or health problems. This situation results in increasing the risks to loss of life and/or property.

Another result of this proposed project's "build" alternatives is a more efficient facility for all users. One of the more positive impacts of these is the ability of the bridge to carry a load in excess of three tons. The restricted capacity of the present bridge, or another closure results in longer travel times, increased fuel consumption, and more vehicle wear and emissions. Alternatives A and B will not allow loads wider than 16± ft. to use this crossing, regardless if they are within the existing or proposed weight limits. The current structure has 19.5 ft. of a maximum vertical clearance over the roadway. The county bridge supervisor placed an 8.4± ft. maximum vehicle height restriction on the existing "Carney Rapids" bridge after it was reopened in the Fall of 1994. Although the "rehab" alternatives will allow the 19.5± ft. maximum height restriction to be reinstated, a new bridge will have no height limitations at all.

2. Land Use/Relocation

Additional right-of-way (R-o-W, up to 0.65 acres) may be required depending on the selection of the "build" alternative. This minor loss of property from the tax rolls will have a negligible effect on revenues for Flathead County. There are no residences or buildings near the bridge, therefore, no relocations of persons and/or businesses are necessary.

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[10] The B-Muth alternative places width and/or height restrictions on large trucks.

All lands needed for R-o-W from private ownerships on this proposed project will be acquired by MDT in accordance with both the *Uniform Relocation Assistance and Real Property Acquisition Act* of 1970 (**P.L. 91-646**), and the *Uniform Relocation Act Amendments* of 1987 (**P.L. 100-17**). Compensation for R-o-W acquisitions is made at "fair market value" for the "highest and best use" of the land. The R-o-W acquired under the "build" alternatives on this proposed project will be conveyed to Flathead County.

The State regards the Swan River as a "navigable waterway" on its reach between the Swan and Flathead Lakes. Therefore, under **70-16-201** and **70-1-202, M.C.A.**, the MONTANA DEPARTMENT OF NATURAL RESOURCES & CONSERVATION (DNR&C, which now includes the former MONTANA DEPARTMENT OF STATE LANDS/DSL) has jurisdiction over the land under this present and proposed crossing. MDT will request the DNR&C to issue an easement if a new bridge is constructed under this proposed project's "build" alternatives, and this easement will also revert to Flathead County. The DNR&C is also a Cooperating Agency on this proposed project's environmental documentation under the provisions of 23 CFR 771.111(d) (and is listed under part **VI.A.** on page 29, following).

C. Environmental Impacts

1. Floodplains

Executive Order Nº 11988 and FHWA's floodplain regulations (23 CFR 650, Subpart A) require an evaluation of this proposed action to determine if any of its alternatives encroach on the "base" floodplain. The "base" floodplain is defined as the area covered by water from a "100-year" flood. The "100-year" flood represents a flood event with the probability of recurring once every 100 years. **Figure 3**, following, shows the Swan River's floodplain in this proposed project's area as delineated on the Flood Boundary and Floodway Map from the FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA). Flathead County administers this floodplain for FEMA, and a Floodplain Development Permit will be required for any encroachments into this regulatory floodplain due to construction.

a) History

The flood history of this bridge leaves no question that this area of the Swan River lies within a floodplain. Apparently, the flood of record (a 75-year event), which occurred in 1974 forced the County to change the approach spans to keep the bridge in service. However, the hydraulic activity at this site is almost completely controlled by the Big Fork Dam located approximately one mile downstream. This dam was constructed *c.*1902 to generate electricity for the Bigfork area; it was raised 4 ft. in 1931.

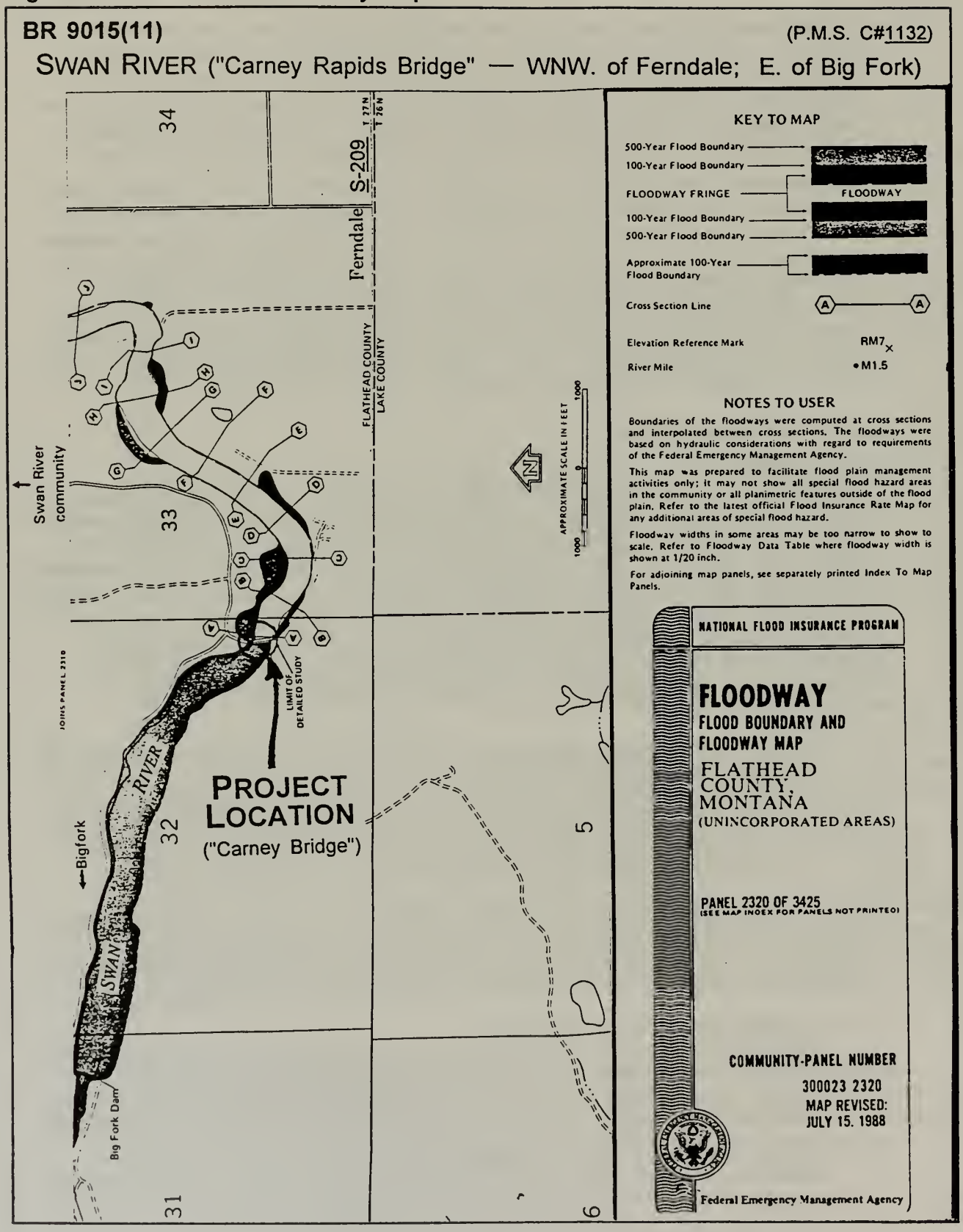
MDT's studies show that the hydraulic characteristics of the Swan River essentially remain the same with the reduced channel width from the proposed encroachments in the 163 ft. Alternative C (see item **III.B.**3. on page 12, previous). Since the other proposed alternates have less (or no) impacts on the floodplain, only Alternative C is discussed as follows:

b) Floodplain Impacts from Alternative C

The hydraulic analysis performed by MDT shows that impacts to the floodplain from this proposed alternative are minimal. Demonstrating that this alternative with the greatest impact does not significantly change the hydraulic characteristics of the Swan River leads to the conclusion that the other alternatives also have no significant effects.

The minimum "pool" level at the Bigfork Dam is the same as the spillway crest elevation of the dam, which is 3008 ft. above mean-sea-level (*msl*). The deepest point in the river channel at the bridge crossing is about 2998 ft. above *msl*.

Figure 3 - Flood Hazard Boundary Map


BR 9015(11)
(P.M.S. C#1132)
SWAN RIVER ("Carney Rapids Bridge" — WNW. of Ferndale; E. of Big Fork)
34
33
32
31
5
6
T 27N
T 26N
S-209
Ferndale
FLATHEAD COUNTY
LAKE COUNTY
Swan River community
Bigfork
JOINS PANEL 2310
LIMIT OF DETAILED STUDY
PROJECT LOCATION
("Carney Bridge")
SWAN RIVER
Big Fork Dam
APPROXIMATE SCALE IN FEET
1000
0
1000
KEY TO MAP
500-Year Flood Boundary
100-Year Flood Boundary
FLOODWAY FRINGE
FLOODWAY
100-Year Flood Boundary
500-Year Flood Boundary
Approximate 100-Year Flood Boundary
Cross Section Line
Elevation Reference Mark
RM7
River Mile
M1.5
NOTES TO USER
Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.
This map was prepared to facilitate flood plain management activities only; it may not show all special flood hazard areas in the community or all planimetric features outside of the flood plain. Refer to the latest official Flood Insurance Rate Map for any additional areas of special flood hazard.
Floodway widths in some areas may be too narrow to show to scale. Refer to Floodway Data Table where floodway width is shown at 1/20 inch.
For adjoining map panels, see separately printed Index To Map Panels.
NATIONAL FLOOD INSURANCE PROGRAM
FLOODWAY
FLOOD BOUNDARY AND FLOODWAY MAP
FLATHEAD COUNTY, MONTANA
(UNINCORPORATED AREAS)
PANEL 2320 OF 3425
(SEE MAP INDEX FOR PANELS NOT PRINTED)
COMMUNITY-PANEL NUMBER
300023 2320
MAP REVISED:
JULY 15, 1988
Federal Emergency Management Agency

Thus, the dam creates a minimum water depth of about 10 ft. at the bridge crossing. The bridge site could either be considered part of the impounded water confined by the dam, or a reach of the Swan River. The velocity of the Swan River at the Base Flood (with a 100-year flood event flow-rate of 9620 cubic ft.-per-second/cfs) is 3.4 ft.-per-second (fps) at the existing bridge.

The total length of the existing bridge is 241 ft.-2 in. To replace the existing steel truss bridge that has timber approach spans and nearly vertical wall abutments with a new bridge having sloping "spill-through" abutments and prestressed concrete beams requires a longer bridge. A new bridge that requires no additional fill into the river, and thus causes no additional increase in backwater elevations, would be about 290 ft. in length. With abutment slopes of 1.5:1, the new bridge is shortened to the proposed 163 ft. structure with only a 0.2 ft.[11] increase in backwater. The 100-year event velocity increased from 3.4 fps to 5.0 fps. For the 100-year frequency, this is a minimal increase. At the average flow of 1160 cfs (established from 66 years of U.S. Geological Survey records), the velocity increase is negligible: from 0.6 fps to 0.9 fps. The flood of record at the gage site is 8890 cfs (1974).

In summary, the flow rate through the existing bridge at the 100-year event is 9620 cfs at a maximum velocity of 3.4 fps. The same flow of 9620 cfs has a velocity through the new bridge opening of Alternative C at 5.0 fps with an increase in backwater of 0.2 ft. The existing surface elevation *at the bridge* during a 100-year flood is 3013.2 ft. above *msl* compared to an elevation of 3013.4 ft. above *msl* (hence the increase of 0.2 ft.) in Alternative C for the same event. These figures show no significant floodplain impacts for Alternative C during the 100-year flood event.

There is a house 600± ft. *upstream from the bridge*; its floor elevation is 3013.9 ft. above *msl*. With the existing structure, the 100-year flood elevation 600± ft. upstream is calculated to be 3013.5 ft. above *msl*. With Alternative C's proposed bridge in-place, MDT's water surface profile calculations show a 100-year flood elevation of 3013.6 ft. above *msl* at this location — an increase of 0.1 ft. over the existing structure's and 0.3 ft. *below* the house's floor elevations.

This proposed project will not promote or encourage development within this delineated floodplain, nor increase flood liability hazards from its construction. This proposed project is therefore considered to be in compliance with Executive Order Nº 11988. Flathead County administers permits for work in floodplains. Therefore, this proposed project's "build" alternatives meet the floodplain management criteria.

2. Erosion Control & Seeding

Construction of highway cuts and embankments, if left unchecked, results in temporary erosion and siltation of the adjacent river. Replacement of the bridge, piers, approach span pilings, and new fills will cause temporary soil surface disturbances and short-term siltation into the Swan River. Temporary erosion control measures, such as silt fences, will be used to minimize and control siltation. Work in the river will be allowed only during those periods specified by the regulatory resource management agencies (*i.e.*: the MDFW&P).

An Erosion Control Plan for this proposed project's "build" alternatives will be submitted to the MDEQ Water Quality Division in compliance with their Montana Pollutant Discharge Elimination System Regulations (ARM 16.20.1314).

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[11] The figure of 0.4 ft. was used in earlier correspondence and has since been changed to 0.2 ft. based on a second hydraulic analysis done by MDT.

Best Management Practices will be used in the design of this Plan using guidelines as established in MDT's Highway Construction Standard Erosion Control Workplan. The objective is to minimize erosion of disturbed areas during and following construction of this proposed project.

MDT will re-establish a permanent desirable vegetation community over all landform surface areas disturbed by the proposed "build" alternatives' construction. This action will be in accordance with **7-22-2152** and **60-2-208, M.C.A.** A set of revegetation guidelines will be developed by MDT that must be followed by the contractor. These specifications will include instructions on seeding methods, dates, mix components, and the types and amounts of mulch and fertilizer. Seed mixes include a variety of species to assure that areas disturbed by construction are immediately stabilized by vegetative cover. The Seeding Special Provisions developed for this proposed project will be forwarded to the responsible County Weed Board for approval.

3. Wetlands

A wetlands survey was conducted and a Wetlands Finding prepared by MDT for this proposed project in May, 1992. A supplemental delineation was conducted in Fall of 1993. Two moderate- to high-value wetlands occur in this proposed project's area. These are described as follows:

a) Site 1
This site occurs northerly of the bridge along the easterly side of the approach road. The wetland is an approximate 0.7 acre emergent/scrub-shrub marsh adjacent to the river which is dominated by cattail, willow, and red-osier dogwood, and is bordered by patches of Douglas-fir/western larch/aspen forest. Habitat interspersion at this site is excellent, providing habitat for a variety of wildlife species. This wetland scored 16 out of a possible 24 points on the MDT/MDFW&P wetland site evaluation form.

b) Site 2
This site, an approximate 2.3 acre emergent shallow marsh, occurs northerly of the existing bridge on the westerly side of the approach road. The wetland is dominated by bulrush and sedge, and was flooded to depths of 6 in. to 1 ft. during the Fall, 1993 survey. This site provides some fish habitat, and is likely used as a foraging area for wildlife such as osprey and great blue heron. This wetland also scored 16 points on the MDT/MDFW&P's wetland site evaluation form.

No wetland loss occurs under Alternative A, again providing there is no sudden, catastrophic collapse of the existing "Carney Rapids Bridge". Wetlands impacts from both versions of Alternative B depend on revisions to the northerly approach (see item **II.B.**2..a.'s "Unresolved Issues on page 11). Originally, it was estimated that 0.26± acres of wetlands would be affected by the proposed new bridge alternatives. However, through modifications, including proposals to steepen slopes and installing guardrails on the northerly approach road; projected wetland impacts have been minimized to the extent practicable under Alternatives C and D. Approximately 0.07 acres of each wetland (a total of 0.14± acres) will be filled as part of the approach road widening proposed under these alternatives. Wetlands in this proposed project's vicinity will be reduced from 3.00± to 2.86± acres. This 4.67±% reduction is not regarded as a significant loss to either wetland in terms of functions and/or values. "Modified" Alternative D and Alternative E both also impact a small amount of wetland (*i.e.*: less than one acre in size).

It is the opinions of MDT's staff biologists that, since there are mature wetlands beyond both sides of the northerly approach, it would be best to leave them undisturbed. The steepness of the banks on the both sides of the Swan River westerly (downstream) of the bridge do not allow for an easy construction of replacement wetland habitat. Easterly (upstream) of the bridge there is another mature wetland on the northerly side. Construction activities to access these areas would impact the quality of these existing wetlands.

No on-site mitigation opportunities have been identified in this proposed project's immediate vicinity. Therefore, the amount of wetland area affected by the selected alternative will be added to the MDT Wetland Ledger. The wetland lost will be replaced when a suitable mitigation site is identified and approved by the Montana Interagency Wetland Group. MDT will continue to pursue additional wetland mitigation sites in compliance with the Interagency Memorandum of Understanding: Management and Mitigation of Highway Construction Impacts to Wetlands in the State of Montana. All proposed work affecting wetlands will be in accordance with Executive Order Nº 11990. This proposed project's Wetlands Finding & Report is included in Appendix D.

In summation: implementation of Alternative A, the "no build" alternative, has no wetlands impacts over the short term; followed by (in order of increasing impacts) Alternative B (rehabilitation, both versions), Alternative D (new 290 ft. bridge), Alternative C (new 163-ft. bridge), followed by "Modified" Alternative D and Alternative E.

4. Biological Resources

A Biological Resources Report (Appendix D) was prepared for this proposed project by MDT in October, 1993. This Report identified the four alternatives (A - D, inclusive) which were under consideration for this proposed project at that time. MDT's staff biologist reviewed Alternatives "modified" D and E following their initial proposals. It was determined that neither of these had any substantially different impacts on biological resources (including wetlands, as discussed under item **IV.C.3.**, preceding) than the other replacement alternatives. Therefore, no addendum and/or revisions were needed for this Report due to biological resources impacts from Alternatives "modified" D or E.

This Report also identifies Federally-listed Threatened/Endangered (T/E) species in the area. The identification of T/E species was conducted in accordance with *Section 7(a)* of the *Endangered Species Act* (**16 U.S.C. 1531 - 1543**) and information in the U.S. FISH & WILDLIFE SERVICE (USF&WS). It has been determined that this proposed project is not likely to adversely affect the bald eagle, and will not affect the peregrine falcon, grizzly bear, gray wolf, or water howellia — all of which are the T/E species found in this region of Montana. Sensitive biological resources present in the project vicinity include water marigold (a plant Species of Special Concern/SSC) and an osprey nest. Neither of these resources will be significantly affected by any of the "build" alternatives. No significant impacts to other wildlife, vegetation, or fisheries (including westslope cutthroat, and bull trout) will result from this proposed project.

The following mitigation/coordination measures for biological resources impacts are required on this proposed project's "build" alternatives:

- the contractor shall contact an MDT biologist to assess the overall status of nesting bald eagles in the project area prior to the onset of construction; and

- the location of construction-related activities, such as staging, batch plant, and borrow/gravel source activities, must receive prior review from an MDT biologist.

Several measures have been considered that minimize or avoid impacts to nesting ospreys resulting from the proposed bridge replacement alternatives C, D, and E, including:

- seasonal and/or weather-related timing restrictions on construction activities for the northerly approach road; or
- relocating a platform and nest structure (at a time *other than* the nesting season) from its present site (on a power pole) to a suitable tree, snag, or pole in the vicinity; and
- "raptor-proof" the existing nest pole to prevent the birds from rebuilding on the same site prior to construction. Two power poles southerly of this nest pole also require "raptor-proofing" to prevent the birds from nesting near the proposed construction area.

Relocating the nest and/or causing the birds to nest further from this proposed project's area will greatly reduce or eliminate disturbance-related impacts from construction activities. It will also likely benefit this and subsequent nesting pairs over the long term. A new or relocated nest would likely be located further from current and future human disturbances. These measures are currently under evaluation by MDT and USF&WS biologists.

(a) Fisheries

The westslope cutthroat trout and bull trout (both are SSC) occur in this proposed project's vicinity, although no spawning activity has been documented in this area. Other cool-water species found in this area include rainbow trout, mountain whitefish, brook trout and kokanee salmon. Local warm-water species include northern pike and largemouth bass. This reach of the river is primarily used for migration by these fish species. Also according to the MDFW&P, other fish including peamouth, northern squawfish, redside shiner, longnose sucker, large scale sucker, pygmy whitefish, slimy sculpin, and yellow perch range in local occurrence from "abundant" to "uncommon".

Impacts on fisheries from the "No-build" alternative are speculative over the long term. The existing bridge would continue to deteriorate and may (suddenly or eventually) collapse. A sudden, catastrophic collapse would likely result in substantial impacts on fisheries from debris and lead-based paint between this crossing and the Big Fork Dam. Evaluating the extent of such impacts is beyond the scope of this document.

Impacts unique to Alternative C concerned the placement of the 3,630 cubic yards of fill for the proposed embankment. Fish habitat near the bridge is suspected to be used for spawning, rearing, and maturing by northern pike, and for rearing and migration by trout and mountain whitefish. It is estimated that between 0.2 and 0.3 acres of habitat would be lost under this alternative's fill and abutments. Additional small amounts of habitat would be lost from the construction of the two piers.

Habitat similar to that lost under the proposed "build" alternatives is abundant in the immediate area. Consequently, it is inappropriate to consider the affected habitat as particularly unique, limiting, and/or critical to local fish populations. No significant hydrological impacts, and/or effects on fish movement will result from any of the "build" alternatives. In 1993, the MDFW&P suggested improving a recreational access area at Bear Creek as mitigation for the loss of fishery habitat. This site is near MT 83, and is approximately 4 miles upstream of this proposed project on the Swan River. Construction of the 163 ft. bridge (Alternative C) would not significantly affect fish (including westslope cutthroat, and bull trout) habitat or activities in the vicinity.

The other "build" alternatives use less fill than Alternative C; therefore, these impose negligible impacts on fish habitat at this crossing. Best Management Practices for sediment and erosion control during construction will be used in compliance with applicable permits (see section **IV.C.**2. on pages 19 & 20, preceding). Consequently, no significant long-term turbidity-related impacts will result from these alternatives.

(b) Plants

Two plant SSC's that occur in this proposed project's vicinity are the water marigold and western witchgrass. Each of these are on the MONTANA NATURAL HERITAGE PROGRAM's (MNHP's) "watch" list. This list includes species considered too common to be listed as "sensitive", but for which specific information is lacking. Both of these species are assigned a state rank of S2, indicating they are considered imperiled in Montana due to the rarity of populations (*i.e.*: 6 to 20 statewide occurrences). Neither of these plant SSC's will be affected by this proposed action.

5. Cultural, Archeological/Historical Resources

MDT performed a Cultural Resources Survey around the existing crossing in the Spring of 1988. This survey yielded only materials limited to recent activities, and no sites on or eligible for listing in the NRHP were identified (at that time). The SHPO concurred with these results in the letter of June 8, 1988 (copy in Appendix B).

The present "Carney Rapids" bridge, as well as the bridge over the Swan River at Bigfork, were recorded as part of a historic bridge inventory for the Historic American Engineering Record (HAER) in 1979 and 1980. That inventory lists the bridges as being classified in Category III by the (former) MONTANA DEPARTMENT OF HIGHWAYS (MDOH, MDT since mid-1991) and the SHPO. This classification meant that the bridges were ineligible for listing on the NRHP.

A private consultant specializing in historic bridge rehabilitations gave a slide show and held a discussion about the present bridge during a public meeting in Bigfork (see item **VI.B.** on page 29, following). This consultant rendered his expert opinion on the condition of the existing bridge, describing his recommendations and comments. During this meeting there was also a general discussion about the history of the bridge and the flood of 1974. A copy of this consultant's report is included in Appendix E. In late September, 1993, three local area residents petitioned the SHPO to determine if the "Carney Rapids" bridge was eligible for the NRHP. On July 22, 1994, the "Kearney "(*sic*)" Rapids Bridge" (site Nº 24FH673) was listed, using NRHP criteria "A" and "C".

The MDT "rehab" option, Alternative B, would not make the bridge ineligible. However, this alternative only accommodates single-lane traffic and has a 20-ton load limit. Although Alternative B-Muth would be capable of carrying legal loads (also with only one lane for traffic), the bridge's historic integrity may be compromised. Both SHPO and the ACHP will need to determine if the bridge is still NRHP-eligible under this alternative (see item **III.B.**2.b. under the Alternative B-Muth Rehabilitation discussions on page 12, previous).

In early May, 1989, the (former) MDOH released a Programmatic Memorandum of Agreement (P.M.o.A.) between that agency, the FHWA, SHPO, and the ACHP. This document was for proposed transportation improvement projects affecting historic roads and bridges.

In part, this P.M.o.A. established a ". . . program to . . . promote management and public understanding of . . . these cultural resources . . . in lieu of . . . *Section 106* procedures . . ." under the *National Historic Preservation Act*, as amended (**16 U.S.C. 470f**). This P.M.o.A. applies to historic road and bridges, only (as stated on its first page), and it was approved initially in mid-1989. Approvals for the amendments to this P.M.O.A. were completed by March 16, 1992. The present "Carney Rapids Bridge" is regarded as being covered by this amended P.M.o.A., and a copy (with its amendments) is in Appendix H.

The (former Federal-Aid) Highways Bridge Replacement and Rehabilitation Program for Historic Bridge Preservation requires states proposing the demolition of a historic bridge as part of a replacement project (under **23 U.S.C. 144(o)(4)**, as amended) ". . . shall first make the" (historic) "bridge available for donation to a" (state or local agency) "or responsible private entity if" (same agency or entity)" enters into an agreement to":

(A) maintain the bridge and features that preserves its historic significance; and

(B) assume all future legal and financial responsibility for the bridge, including an agreement to hold the state's transportation agency harmless in any liability action.

The costs incurred by the agency or entity to preserve the historic bridge are eligible for reimbursement up to but not in excess of the demolition estimate for that bridge. MDT and the Flathead County Commission issued a **NOTICE** for preservation of the "Carney Rapids Bridge" in compliance with this Historic Bridge Preservation Program. A copy of this **NOTICE** is on page iii of this document.

Federally-funded actions affecting historic bridges that are on, or considered as eligible for the NRHP also must comply with *Section 4(f)* of the *U.S. DEPARTMENT OF TRANSPORTATION Act* of 1966, as amended (**49 U.S.C. 303**). This compliance is discussed further under item **IV.C.**10 on page 26, following.

6. Noise

Due to the unexpected results from the Spring, 1994 traffic count (see item **II.D** on page 6, preceding), a Noise Analysis was performed and its results are tabulated below. Traffic noise levels were calculated using existing and projected volumes. The numbers represent preliminary estimates derived from actual counts and adjusted by MDT planners. The equivalent hourly noise levels [$L_{eq}(h)$] in decibel range "A" (dB_A) for the projected "Design Year" (2013) are calculated at varying distances with traffic traveling at 20 MPH. These estimates are listed under **Table II** as follows:

Table II
Noise Levels

Distance from Proposed Centerline	Present Year Noise Level	Design Year (2013) Noise Level
98 ft.	49 dB_A	56 dB_A*
164 ft.	45 dB_A	53 dB_A
230 ft.	43 dB_A	51 dB_A

* This traffic moving at 55 MPH shows an increase of 1 dB_A.

These figures are based on the following traffic information:

1994 ADT =	710
2013 ADT =	1980 (design year)
Design Hourly Volume (DHV) =	250
Directionality (D) =	55% - 45%
Trucks (T) =	8.6%

The preceding $L_{eq}(h)$ calculations indicate that Design Year noise levels will not increase substantially (more than 10 dB_A) over existing levels; nor will Design Year noise levels exceed the Noise Abatement Criteria of 67 dB_A for potentially sensitive receivers under 23 CFR 772 Activity Category B (schools, residences, churches, public meeting facilities). Overall, traffic noise level increases will be insignificant with the construction of any of this proposed project's "build" alternatives. No existing sensitive receivers have been identified in the vicinity of the proposed bridge improvement.

7. Visual

A formal Visual Assessment was prepared to evaluate the visual impacts on the existing aesthetic values in and around the present Swan River crossing. Alternative C was used for determining these impacts as it is regarded as having more than the other "build" alternatives. A copy of the Visual Assessment Report is included in Appendix F. In summary, this assessment concluded that the proposed bridge improvement would cause minor detriments to the aesthetic value and overall visual quality in the area. The data demonstrates that the farther away from this proposed action — the less impacts it has on the visual qualities innate to the area.

The *majority* of those seeing this bridge at more of a "macro" level are traveling east or west on S-209. This means that the existing bridge is either in the distant middle-ground, or part of the background, and the exposure viewing time to this group is short in duration. The people *most frequently* seeing the bridge site are local residents and recreationists crossing (or in) the Swan River at this location. Their viewing time is moderate (*i.e.*: 30 seconds to a half day). At this "micro" level the bridge is more a part of the middle- and foregrounds, and changes in the aesthetics of the area would be more noticeable due to proximity. However, the changes outlined in this Visual Assessment are shown to be minor (*i.e.*: only a one point difference on a seven-point scale in the overall Visual Quality).

The Visual Assessment's data found no significant loss of the visual quality to the area from the proposed "build" alternatives. However, those *most frequently* viewing this crossing will perceive a noticeable change. Most noticeable will be the absence of the steel truss that has been there since 1911. The truss has become a reference for westbound motorists on S-209 indicating that Bigfork is (roughly) two miles away. For river recreationists, the bridge represents the nearest easy-access to the Swan River above Big Fork Dam. The proposed replacement alternatives (C, D or E) will change the view from a narrow 84-year old steel truss with a wooden deck and approaches to a new, wider concrete deck and girder bridge.

The controversy between the aesthetics of the existing bridge and the proposed replacement alternatives is cognitive in nature (*i.e.*: what is perceived by different viewers). Arguably, the possibility of change is more the source of a perceived visual obtrusiveness rather than its nature or the change itself.

The perceived visual effects consist of the visual resource change combined with the viewer response. The visual impact is composed of the viewer's response to the visual resource change. This proposed project's Visual Assessment Report demonstrates that the visual resource change is minor while the viewer response varies with the individual.

This proposed project's Visual Impacts Assessment follows the recommended method of measuring visual characteristics that are difficult to quantify. This process is set forth in the *Visual Impacts Assessment for Highway Projects* manual provided by the FHWA's (former) Office of Environmental Policy. The goals of this manual are to provide a uniform means of objectively quantifying what is subjectively perceived through a qualitative analysis. This uses the concepts of art and architecture involving vividness, intactness, unity, forms, lines, colors, and textures and related techniques. The purpose of this manual is to provide a background of information in order to perform a step-by-step outline for a Visual Impact Assessment. For more information on how this assessment was prepared, consult the manual (publication Nº FHWA-HI-88-054).

8. Air Quality
This proposed project is in an unclassifiable/attainment area of Montana for air quality under 40 CFR 81.327, as amended. As such, it is not covered under the EPA's **Final Rule** of November 24, 1993, on Air Quality conformity. Therefore, this proposed project complies with *Section 176(c)* of the *Clean Air Act* (**42 U.S.C. 7521(a)**), as amended.

9. Hazardous Substances
As was referenced previously under item **III.B** (pages 9 - 12, inclusive), the existing bridge's steel members are coated with a lead-based paint. Impacts from this hazardous substance may result from a sudden, catastrophic collapse as referenced under Alternative A. Impacts from removing lead paint will occur under both rehabilitation alternatives and Alternative E before the steel is repainted. Also, the owner(s) of the existing "Carney Rapids" bridge will be responsible for the proper handling and disposal of the lead paint with Alternative E. This will occur *regardless* if the existing bridge remains in-place, or is moved. The other replacement alternatives (C and D) will have no substantial impacts from the lead paint as the structure will be demolished and removed. A bridge demolition plan with specific controls for the lead paint will be required for these proposed alternatives.

There are no other known hazardous substances or sources of hazardous wastes in this proposed project's area. The contractor will be required to take precautions to minimize the effects of construction operations, and to prevent leakage or spilling of fluids from the equipment (under any of the "build" alternatives).

10. *Section 4(f)* of the *U.S. DEPARTMENT OF TRANSPORTATION Act*
As referenced under item **IV.C.5.** (on page 24, preceding), this proposed action is also under the provisions of *Section 4(f)* of the *U.S. DEPARTMENT OF TRANSPORTATION Act* (**49 U.S.C. 303**), as amended. These provisions apply to Federally-funded transportation actions that affect sites on or eligible for the NRHP, a publicly-owned park, recreation area, and/or a wildlife/waterfowl management area. This proposed project's alternatives C, D, or E will affect the NRHP eligibility of the present "Carney Rapids" bridge. Alternative B-Muth may also have the same effect as its proposed rehabilitation may result in the existing bridge no longer being on (or eligible for) the NRHP.

[IV.C.10. *Section 4(f)* - conclusion:]

In mid-1983, the FHWA developed a "Nationwide" Programmatic *Section 4(f)* Evaluation for proposed projects affecting historic bridges that are on, or eligible for the NRHP. A copy of this proposed project's completed "Nationwide" Programmatic *Section 4(f)* Evaluation form for Historic Bridges is included in Appendix G. This proposed project will not impact any other *Section 4(f)* sites such as publicly-owned parks, recreation areas, or wildlife/waterfowl management areas.

D. Construction Impacts

Bridge construction activities from this proposed project's "build" alternatives will cause temporary inconveniences to the traveling public and recreationists. These disturbances include longer travel times, detours, complete closure, and additional noise and dust due to the heavy machinery. These will occur for one or two years (or about six to eight months less under the "rehab" alternatives) after the proposed construction begins. There will be less temporary disruptions associated with Alternative E as the existing "Carney Rapids" bridge will be available as a detour route (again, providing there are no additional impacts on it from loads in excess of its current 3-ton limit).

The contractor will be subject to all state and local laws to minimize construction noise by having mufflers on all equipment. Dust control will also be required by using either water, or another approved dust-suppressant. All work under this proposed project's "build" alternatives will be subject to Article 107.12 ENVIRONMENTAL PROTECTION under the Montana Supplemental Specifications to the 1987 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION as adopted by the (former) MDOH and the (former) MONTANA STATE HIGHWAY COMMISSION (known as the MONTANA TRANSPORTATION COMMISSION since July 1, 1995). A copy of this Article is under Appendix I of this document.

Traffic control plans will be prepared by MDT and included in the "build" alternatives contract plans and specifications. These plans will include, but are not limited to the following items:

- signing;
- weekend and holiday work-window restrictions;
- timing of closures;
- limitations of work during winter; and
- advertising advance notice of extended closures.

Construction of this proposed project will create both jobs, and the need for local services and supplies. It will provide a short-term economic benefit to the local area and Bigfork. Completion of this proposed project will not cause any long-term changes in the area's economy.

V. PERMITS REQUIRED

This proposed project's "build" alternatives will require the following permits to be obtained prior to any relevant disturbances:

This proposed project will be in compliance with both the Water Quality provisions of **75-5-308 M.C.A.** for *Section 3(a)* authorizations, and the *Montana Fish & Wildlife Act*'s sections concerning **Stream Protection** (**87-5-501** through **509 M.C.A.**, inclusive):

A ***124SPA*** Stream Protection Permit is required by the MDFW&P.

All work will also be in accordance with *Section 319* of the *Water Quality Act* of 1987 (**P.L. 100-4**).

A *Clean Water Act* (**33 U.S.C. 1251 - 1376**) - *Section 402*/Montana Pollutant Discharge Elimination System permit from the DEQ's Water Quality Division.

A *Clean Water Act* (**33 U.S.C. 1251 - 1376**) - *Section 404* permit from the U.S. ARMY - Corps of Engineers (CoE). The CoE will determine if this proposed project qualifies for a "Nationwide" permit under the provisions of 33 CFR 330.

A FEMA floodplain development permit from Flathead County.

A "Special Purpose" permit (ref.: 50 CFR 21.27) from the USF&WS to relocate the osprey nest from the power pole.

VI. COORDINATION WITH OTHERS

A. Agency Coordination

MDT contacted the following agencies and parties in preparing both the original and this Revised EA:

- FLATHEAD COUNTY (Commissioners and Road Department);
- DEQ (formerly the MDH&ES, Water Quality Division);
- DNR&C (formerly the DSL, Environmental Coordinator and NorthWestern Land offices);
- MDFW&P (Fisheries, and Parks Divisions, and Kalispell Region № 1 offices);
- MNHP (STATE LIBRARY);
- SHPO (Historical Society);
- CoE (Regulatory office);
- U.S. DEPT. OF THE INTERIOR (Regional Environmental Affairs office);
- USF&WS (MT, and Creston field offices);
- FHWA (MT Division office); and
- Friends of Wild Swan.

Legal correspondence includes the following:

- James H. Goetz, Atty. to MDT (August 31st and September 22, 1994); and
- MDT reply to James H. Goetz (September 20, 1994).

Correspondence with concerned individuals includes the following:

- MDT letter to Kathy Nelson (P.O. Box address in Bigfork, February 16, 1993);
- letter from Aba Lichtenstein (address in Tenafly, NJ, December 29, 1993);
- written comments from Maggie Bagon (Bigfork address, received February 16, 1994); and
- letter from Barbara Bennetts (P.O. Box address in Bigfork, April 11, 1994).

B. Public Involvement

A Letter of Intent (L.o.I.) announcing this proposed project was sent to both the *Daily Interlake* of Kalispell, and the *Bigfork Eagle* on October 15, 1987. This L.o.I. also solicited comments on the proposed project. A News Release appeared in the same newspapers on December 23, 1992, and January 6, 1993. This announced a public Informational Meeting to be held in the Bigfork High School's Music Room on January 11, 1993. This event presented the proposed project to the public, and also solicited comments on the proposed action. About thirty-five (35±) attended this Meeting. There was some opposition expressed by individuals who either viewed this proposed project as unnecessary, or that its environmental impacts may be too severe.

On February 20, 1993, (Saturday) beginning at 7:30PM-MST, a meeting was held in Bigfork at the Methodist Church. This event was organized by private citizens who had a consultant perform an independent study of the existing "Carney Rapids" bridge. Notes from that meeting are included in Appendix C, and the consultant's report follows in Appendix E.

A public meeting was held in Bigfork on February 2, 1994, and approximately forty-five (45) attended. MDT presented this proposed project's alternatives under consideration at that time, and the FLATHEAD COUNTY Fire Marshall spoke in favor of a new bridge. In general, the public was divided over building a new bridge. Some wanted a new structure that would provide better access for fire protection and ambulance service. Others preferred the "no build" alternative in order to preserve the existing (perceived) setting in terms of aesthetics. It was clear that very few people were in favor of Alternative C if a new bridge was to be built. As a result, it is no longer being considered by Flathead County and MDT as an acceptable alternative. Although split on other issues, there was a general consensus that the river access should be perpetuated.

A formal Public Hearing will be held in which this Revised Environmental Assessment will be available to the public. Additional public comment will be received at that time, and for at least forty-five (45) calendar days after distribution of this EA in accordance with the September 20, 1994 letter from MDT's Director (copy in Appendix B under part **VIII.**, following). Public comments will be evaluated to determine the following:

- whether significant impacts occur from any of this proposed project's alternatives;
- if further consideration of the impacts discussed herein is necessary; and/or
- if new issues have arisen that need to be included in this EA.

C. Distribution List of Document

The following agencies, groups, and individuals are being sent a copy of this EA:

U.S. DEPARTMENT OF THE INTERIOR
Main Interior Building, MS 2340
1849 C Street Northwest
Washington, DC 20240

Attention: Director, Office of Environmental Policy & Compliance

U.S. DEPARTMENT OF THE INTERIOR
Geological Survey, MS 760
432 National Center
Reston, VA 22092

Attention: Chief, Environmental Impact Assessment Program

U.S. DEPARTMENT OF THE INTERIOR
Fish & Wildlife Service
P.O. Box 10023
Helena, MT 59626

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration
301 South Park, Drawer #10056
Helena, MT 59626

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
P.O. Box 20001
Cogswell Building, Room A206
Helena, MT 59620-0901

Attention: Jack G. Thomas, Administrator Water Quality Division

MONTANA DEPARTMENT OF NATURAL RESOURCES & CONSERVATION
P.O. Box 202301
1520 East 6th Avenue
Helena, MT 59620-2301

MONTANA DEPARTMENT OF NATURAL RESOURCES & CONSERVATION
NorthWestern Land Office
P.O. Box 7098
Kalispell, MT 59904-0098

(**VI.C. Distribution List** - conclusion:)

State Clearinghouse
% Office of Budget & Program Planning
Capitol Building, Room #221
Helena, MT 59620

State Library
Collections Management Librarian
1515 East 6th Avenue
Helena, MT 59620-1800

Environmental Quality Council
Office of the Director
Capitol Post Office Box 215
Helena, MT 59620

Flathead County Commissioners
Flathead County Courthouse
Kalispell, MT 59901

Steve Kelly
% Friends of the Wild Swan
127 West Main, #F
Bozeman, MT 59715

Save the Swan River Committee
% Tammy & Gary Riecke
P.O. Box 363
Bigfork, MT 59911

Maggie Bagon
27530 East Shore Rte.
Bigfork, MT 59911

Barbara Bennetts
P.O. Box 1066
Bigfork, MT 59911

Neal Brown
560 Wolf Creek Drive
Bigfork, MT 59911

Goetz, Madden & Dunn, P.C.
35 North Grand
Bozeman, MT 59715

Attention: James H. Goetz, Attorney

Aba Liechtenstein
26 Trafalgar Road
Tenafly, NJ 07670

Kathy Nelson
P.O. Box 301
Bigfork, MT 59911

Don Ryan
% Rickie Gallery
452 Electric Avenue
Bigfork, MT 59911

Art Whitely
P.O. Box 17
Bigfork, MT 59911

Don Williams
1235 Swan River Rd.
Bigfork, MT 59911

VII. EXHIBITS

The following **Figures** are exhibits of the existing "Carney Rapids Bridge" and the proposed "build" Alternatives "Modified" D and E:

Figure 4 - Existing Layout of Swan River Bridge, one mile west-northwesterly of Ferndale.

Figure 5 - "Modified" Alternative D; on a 15° curve over existing alignment.

Figure 6 - Alternative E; new alignment 30 ft. upstream (easterly) of existing alignment.

Figure 4 - Existing Layout of Swan River Bridge

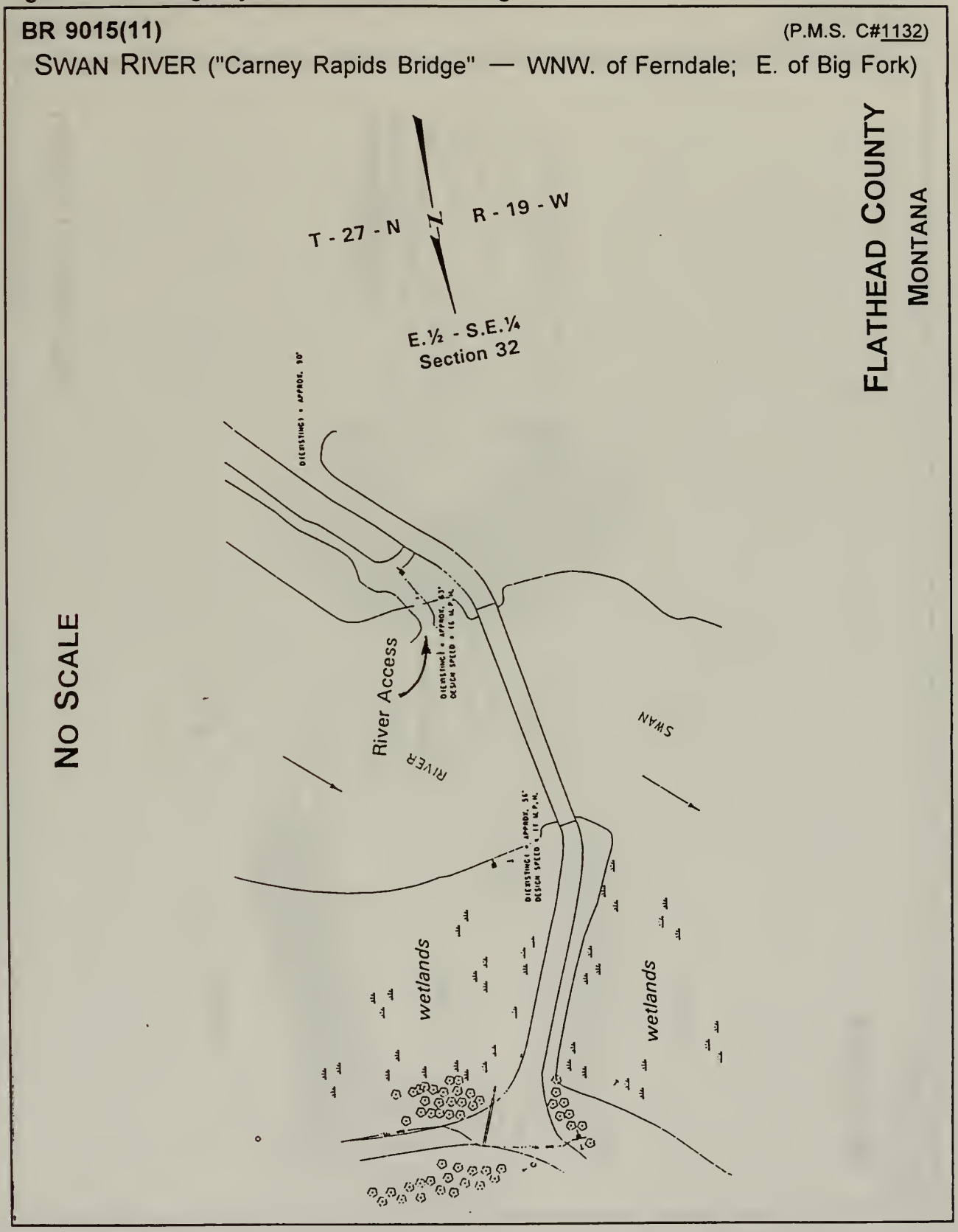


Figure 5 - "Modified" Alternative D for Swan River Bridge

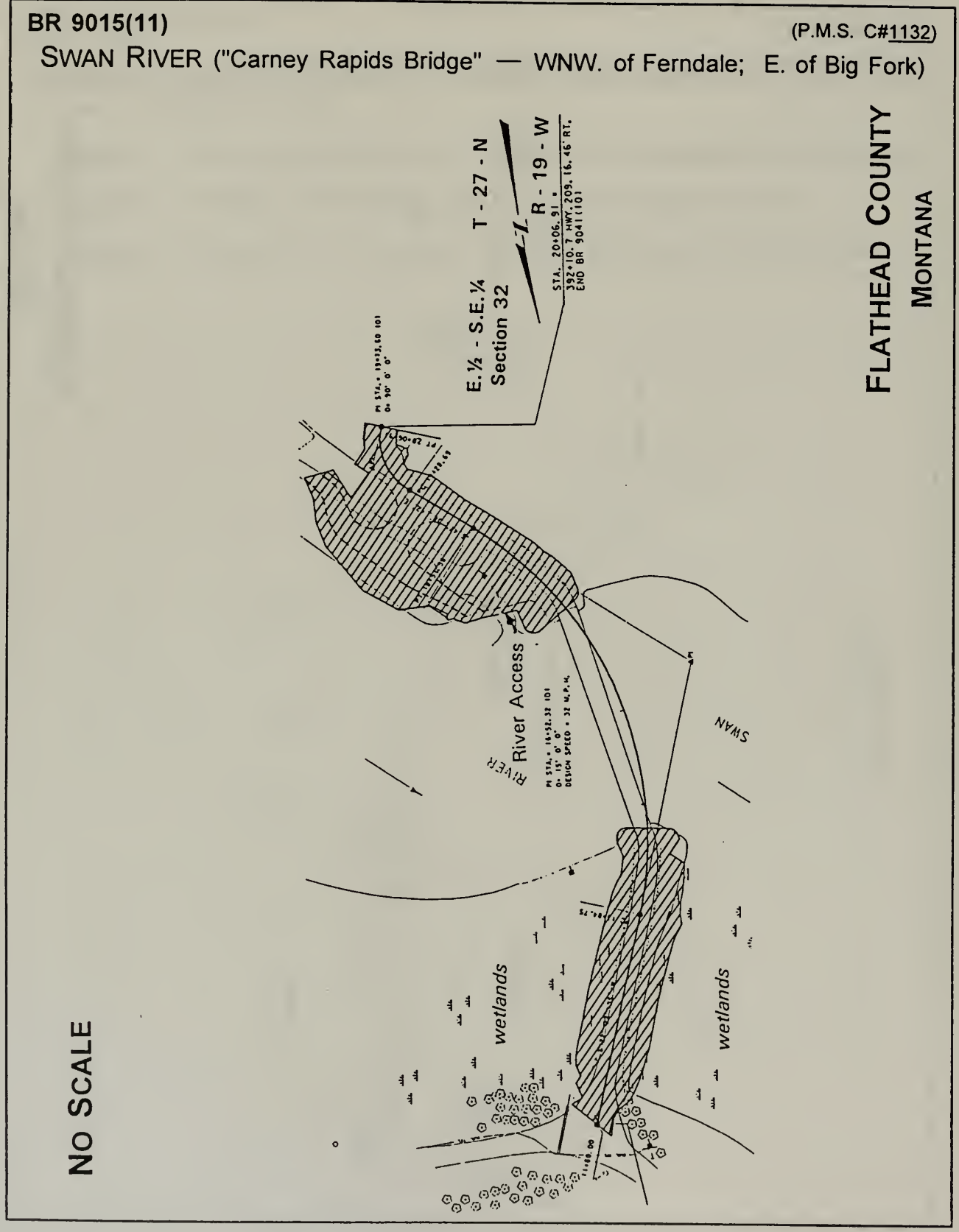
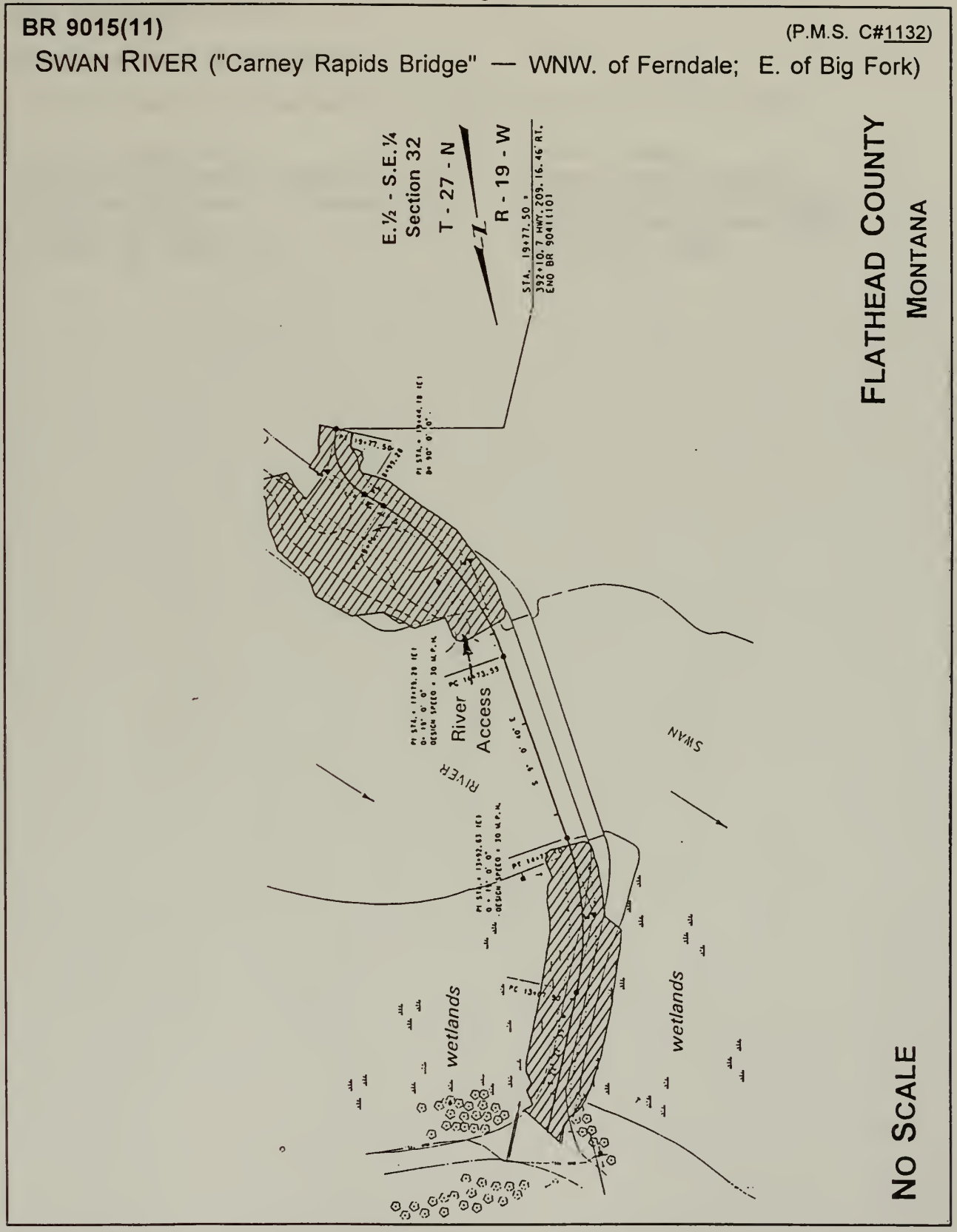


Figure 6 - Alternative E for Swan River Bridge



VIII. APPENDICES

Appendix A: List of Preparers

The following parties are responsible for the preparation and content of this document:

Joel M. Marshik, P.E.
Environmental Services Manager
MONTANA DEPARTMENT OF TRANSPORTATION
P.O. Box 201001
Helena, MT 59620-1001

Dale W. Paulson
Environmental Coordinator
Federal Highway Administration
301 South Park, Drawer 10056
Helena, MT 59626

Appendix B: Correspondence

JAMES H. GOETZ
WILLIAM L. MADDEN, JR.
THEODORE R. DUNN*
BRIAN K. GALLIK
ROBERT K. BALDWIN
RICHARD J. DOLAN
*ADMITTED IN MONTANA AND ALASKA

GOETZ, MADDEN & DUNN, P.C.
ATTORNEYS AT LAW
35 NORTH GRAND
BOZEMAN, MONTANA 59715

AREA CODE 406
TELEPHONE 587-0618
FAX PHONE NUMBER 587-5144

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ENVIRONMENTAL BUREAU

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AUG 08 1994
MT. DEPT. OF TRANSPORTATION
DIRECTORS OFFICE

August 5, 1994

Honorable County Commissioners
Sharon Stratton, Howard Gipe and Bill Hedstrom
Flathead County Courthouse
800 South Main
Kalispell, MT 59901

Dear Commissioners:

I have been retained by the "Swan River Bridge Defense Fund," a Bigfork-based public interest group which is interested in preserving the old Kearney Rapids Bridge over the Swan River, near Bigfork, Montana (sometimes referred to as the "Carney" Rapids Bridge). This bridge is also referred to by the Montana Department of Transportation as "BR 9015 (11) Swan River Bridge-West of Ferndale, Flathead County, two miles east of Bigfork, Montana."

I understand that you have recently voted in favor of a proposal to demolish the old bridge and replace it with a newly-constructed bridge and, in so voting, you rejected a proposal to rehabilitate the present structure.

It is my understanding that, just prior to your vote against rehabilitating the bridge, there was a recalculation of certain cost figures provided by Engineer Frank Muth relating to rehabilitation, but that Mr. Muth was not contacted to discuss the revision of his figures. I am further informed that the figures regarding rehabilitation are needlessly and artificially high, while the estimate for new construction is unrealistically low. We request that you re-look at those figures and request the opportunity to review such figures in advance and provide professional input.

In addition to "rehabilitation," there is a separate alternative of repairing the bridge as it now stands. I understand that this alternative has been the subject of a recent meeting with you but that the alternative was turned down solely because the costs of such alternative must be completely borne by the County.

The main purpose of this letter is to inform you that the bridge has recently been placed on the National Register of Historic Places.

The fact that the bridge is on the National Register triggers certain important legal requirements. Among these is the requirement under Section 4f of the National Transportation Act of

cc. Tom Barnard

1966, 49 U.S.C. § 303. Under that provision, it is the policy of the United States Government ". . . that special efforts should be made to preserve the natural beauty of the countryside and public park and recreational lands, wildlife and waterfowl refuges, and historic sites." Toward that end, the Secretary of Transportation may not approve a transportation program or project requiring the use of land ". . . of an historic site or national, State, or local significance . . . " if there is a prudent and feasible alternative to using that land.

Moreover, Section 106 of the National Historic Preservation Act contains other special requirements regarding consultation prior to destruction of a structure of historic significance.

I have reviewed the draft Environmental Assessment prepared by the Montana Department of Transportation dated December 1993. It is my opinion that the analysis is not sufficient to comply with these statutory standards, nor is it adequate under the federal and state Environmental Policy Acts. The premise of the document is that this bridge does not qualify for listing on the National Register of Historic Places. That premise is wrong. Further analysis of the historic qualities of this structure will be necessary. There are clearly reasonable and prudent alternatives available which are consistent with saving the bridge.

The purpose of this letter is to put you on notice of these deficiencies and to request, on behalf of the group that I represent, that the County Commission take no action toward destruction of the bridge without adequate advance notice so that we may seek injunctive relief if necessary.

In the meantime, I would appreciate a letter from you or the Flathead County Attorney indicating in detail your schedule for dealing with the bridge.

Finally, I am informed that the bridge is closed to traffic now because of the failure of one stringer and that such stringer might possibly be repaired for a reasonably nominial sum. It seems prudent that the County expend that sum to make the bridge useable for the time being, and my group so requests on behalf of the neighbors in the area who have historically used the bridge.

Sincerely,

GOETZ, MADDEN & DUNN, P.C.

James H. Goetz

nks
cc: Marvin Dye, Director, Montana Department of Transportation

Montana Department of Transportation
2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Marc Racicot, Governor

September 20, 1994

GOETZ, MADDEN, & DUNN, P.C.
35 North Grand
Bozeman, MT 59715

Dear Mr. Goetz

Thank you for the August 31, 1994, letter outlining your concerns regarding the Swan River Bridge - West of Ferndale (also known as the "Kearney Rapids" Bridge). I would like to clarify the following:

- You are correct in that the December '93 Environmental Assessment (EA) is an initial or draft EA, approved for circulation to the public by the Federal Highway Administration (FHWA) as per 23 CFR 771.119 (*NEPA*) and that the Revised EA is pending.

- We also understand that since the initial EA was circulated, the status of the bridge in relation to the National Register of Historic Places (NRHP) has changed. It is our full intent to meet all legal requirements regulating activities concerning historic structures which you have cited. This new information will be addressed and included in the Revised EA in the form of a Programmatic 4(f) for Historic Bridges. The State Historic Preservation Office (SHPO) and the Advisory Council for Historic Preservation (ACHP) have been consulted and agree that the Programmatic Agreement is an acceptable treatment of this bridge. In the Revised EA, information outlining the feasibility and prudence and all measures to minimize harm for each of the alternatives will be addressed.

- The Revised EA will also document further project developments such as public input and discussions and a long term cost analysis.

In 1989, the FHWA, SHPO, ACHP, and the Montana Department of Transportation (MDT) signed a Programmatic Memorandum of Agreement absolving the Department from its Section 106 responsibilities. In return, MDT was required to complete narrative histories of roads and bridges in Montana, develop an educational program and establish a Historic Preservation Plan (HPP) for roads and bridges in Montana. According to the draft HPP now circulating in the Department, MDT would be required to consider rehabilitation as an option to replacement. It appears this was done for this bridge. A copy of the Programmatic Agreement draft HPP is available on request.

Project development will consist of circulating the Revised EA with the Programmatic 4(f) Agreement attached. A 45-day comment period will follow.

An Equal Opportunity Employer

The Flathead County Commissioners will be given an opportunity to review this new information to determine if their original preferred alternative is still valid (new 290-foot bridge).

Public input will be addressed and attached to the Revised EA and then MDT will send the package to the FHWA requesting approval for them to issue a Finding of No Significant Impact (FONSI).

Hopefully, the Revised EA/FONSI will be completed by the beginning of the next construction season as the bridge is currently impassable.

Sincerely,

Marvin Dye, Director
Montana Department of Transportation

JTW:KMH:SRS

cc: Joe Kolman
Lyle Manley
Flathead County Commissioners
Governor Racicot
Gordon Stockstad
Carl Peil
Jim Weaver

JAMES H. GOETZ
WILLIAM L. MADDEN, JR.
THEODORE R. DUNN*
BRIAN K. GALLIK
ROBERT K. BALDWIN
RICHARD J. DOLAN
*ADMITTED IN MONTANA AND ALASKA

GOETZ, MADDEN & DUNN, P.C.
ATTORNEYS AT LAW
35 NORTH GRAND
BOZEMAN, MONTANA 59715

AREA CODE 406
TELEPHONE 587-0618

FAX PHONE NUMBER
(406) 587-5144

MASTER
FILE
COPY

September 22, 1994

RECEIVED
SEP 23 1994
MT. DEPT. OF TRANSPORTATION
OFFICE OF THE DIRECTOR

Marvin Dye, Director
Montana Department of Transportation
2701 Prospect Avenue
P.O. Box 201001
Helena, MT 59620-1001

RE: Swan River Bridge ("Kearney Rapids" Bridge)

BR 9015(11)

Dear Mr. Dye:

Thank you for your letter of September 20, 1994, regarding the "Kearney Rapids" Bridge. There is much about your letter I don't understand. For example, you suggest that a programmatic memorandum of agreement has "absolved" the Department from its Section 106 responsibilities and that "the programmatic agreement is an acceptable treatment of this bridge."

If, by that you mean that a site-specific review regarding this bridge is unnecessary, then I respectfully disagree.

However, elsewhere in your letter you suggest that the revised Environmental Assessment will study this bridge and preservation and rehabilitation alternatives on a site-specific basis.

We will await receipt of the final Environmental Assessment before commenting further.

Sincerely,

GOETZ, MADDEN & DUNN, P.C.

James H. Goetz

cc: Barbara Bennetts
Flathead County Commissioners

cc: Gordon Stockstad
Carl Peil
Jim Weaver
Lyle Manley
Joe Kalman

Recd. Preconst. 9-27-94

MAIL ROUTE	Attach	Initial
30 Preconst Engr		
30 Assistant		
30 Office Mgr		
31 Safety Mgmt.		
32 Road Design		
33 Environment		
34 Hydraulics		
35 Survey & Mapping		
36 Traffic Eng.		
37 Traffic Operations		
39 Consultant Dsn.		
File		

JHG:nks

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MONTANA DEPARTMENT OF TRANSPORTATION

BR 9015(11)

Swan River Bridge

Ferndale - #1132

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FEB 16 1994
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You are invited to make your comments on this form and leave it with the Hearing Officer or take it with you and mail it to Carl S. Peil, P.E., Montana Department of Transportation, P.O. Box 201001, Helena, MT 59620-1001.

Please indicate your name, address, and affiliation (if any) below. Thank you for your interest and comments on this project.

NAME AND ADDRESS: Maggie Bagon 27530 East Shore Rt Bigfork (formerly of 936 Swan River Rd

COMMENTS: I would just like to state that I have never proposed leaving the bridge as is, however I believe that rehabilitating the old bridge, using steal decking would be the solution that would make the MOST people happy.

BIGGER IS not always better and I believe a two-lane bridge will ~~not~~ increase the risk of accidents.

Thank you for your time

Maggie Bagon

Date Recd From Const 2-16-94

Act	Info	MAIL ROUTE	Attach	Initial
	✓	30 Preconst Engr		
		30 Assistant		
		30 Office Mgr		
		31 Safety Mgmt.		
	✓	32 Road Design		
	✓	33 Environment		
	✓	34 Hydraulics		
		35 Survey & Mapping		
		36 Traffic Eng.		
		37 Traffic Operations		
		39 Consultant Dsn.		
✓		Bridge		

~~BRTM: D: PAF: 13~~ kmc-2

BENNETTS AGENCY
REALTORS
P.O. Box 1066
BIGFORK, MONTANA 59911

APR 14 1994
ENVIRONMENTAL BUREAU

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April 11, 1994

Dear Mr. Axline,

Thank you for the copy of "Monuments Above the Water." I am enjoying having my own copy.

I trust you know the State Historic Preservation Staff and the Nomination Review Board have approved the nomination of Kearney Rapids Bridge east of Big Fork, as a Historic Site. What are the implications of this on the construction project that is proposed for Kearney Rapids Bridge?

It is my understanding that no matter what the Programmatic is the bridge falls under 4F consideration which directs the Department of Transportation to consider prudent and feasible alternatives. Is this being done?

Who will make the final decision on whether the bridge will be restored or a new one will be built and when? If the final Environmental Assessment is still coming out would you get my name on the mailing list to receive one?

Thank you for keeping me up-to-date on the progress of this project.

Sincerely yours,

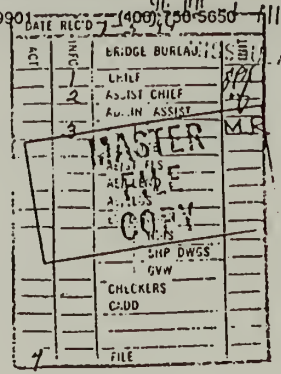
Barbara Bennetts

Barbara Bennetts

BARBARA BENNETTS, Broker-Owner • Phone 406/837-4997 • FAX 406/837-4997

Flathead County
Board of Commissioners

800 SOUTH MAIN STREET • KALISPELL, MONTANA 59901 • (406) 758-5650



June 22, 1994

Mr. James T. Weaver, District Engineer
Montana Department of Transportation
P. O. Box 7039
Missoula, Montana 59807

Re: Project # Control # 1132
BR 9015(11)
Kearney Rapids Bridge
Near Bigfork, Montana

Dear Jim:

Please be advised that the Flathead County Board of Commissioners did meet on Tuesday, June 21, 1994, in regular session and made a formal decision on the above referenced project.

That decision was that there should be a new, long bridge built at this location to replace the existing structure. This decision was based upon cost factors, and safety factors.

Thank you for all your help in this matter.

Sincerely,

FLATHEAD COUNTY BOARD OF COMMISSIONERS

William R Hedstrom
William R. Hedstrom - Chairman

Howard W. Gipe - Member

Sharon L. Stratton
Sharon L. Stratton - Member

cc: Mr. Larry Brazda
Montana Department of Transportation
Kalispell, Montana 59901

Swan River Bridge File

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Affairs
Denver Federal Center, Building 56, Room 1003
P.O. Box 25007 (D-108)
Denver, Colorado 80225-0007

TAKE PRIDE IN AMERICA

MASTER FILE COPY

BR 9015(11) CN 1132
Swan R. Br. W of Ferndale

February 10, 1994

RECEIVED
FEB 14 1994
ENVIRONMENTAL BUREAU

ER 94/27

Gordon J. Stockstad, Acting Chief
Environmental and Hazardous Waste Bureau
Montana Department of Transportation
P. O. Box 201001
Helena, Montana 59620

Dear Mr. Stockstad:

The Department of the Interior has reviewed the Draft Environmental Assessment for the Swan River Bridge, west of Ferndale, Flathead County, Montana and has the following comments.

Cultural Resources

If any cultural or archeological material is discovered during the excavation phase of construction, consultation with the Montana State Historic Preservation Officer and the Confederated Salish and Kootenai Tribes should be conducted, pursuant to Section 106 of the National Historic Preservation Act, as amended.

Sincerely,

Barbara M. Schmaltz

for Robert F. Stewart
Regional Environmental Officer

Karl Helvick

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
215 NORTH 17TH STREET
OMAHA, NEBRASKA 68102-4978

November 18, 1993

REPLY TO ATTENTION OF

MASTER FILE COPY

U.S. Army Corps of Engineers
1520 East 6th Avenue
P.O. Box 202301
Helena, Montana 59620

NOV 19 1993

CC: Tom Barnard
Jim Hill
Jim Weaver
Karl Helvick

Gordon Stockstad, Acting Chief
Environmental & Hazardous Waste Bureau
Montana Department of Transportation
2701 Prospect Avenue
Helena, Montana 59620-9672

Dear Mr. Stockstad:

This is in reference to my meeting with Mr. Karl Helvik on November 16, 1993, concerning the Swan River Bridge Environmental Assessment (Project BR 9015(11). We discussed Corps of Engineers' letter of comment dated September 22, 1993.

The updated Environmental Assessment (EA) and aerial photography provided by Mr. Helvik addresses our comments identified in our September letter. Concerning our comment number 5, "The EA indicates that in lieu of the fishery impacts that would occur for alternative C.....mitigation in the form of improving Bear Creek FAS...is not acceptable mitigation". Our comment remains the same pertaining to this item. It is not known at this time whether mitigation will be required for adverse impacts associated with any of the alternatives. It appears the only alternative which may require mitigation would be Alternative C, construction of a new 163-foot bridge. It also appears that the aquatic areas that would be filled, however small, have characteristics that could justify mitigation. Although more costly, it appears that Alternative D, construction of a new 290-foot bridge, would be the "least damaging practicable alternative". If required, and if the cost of mitigation for Alternative C is added to its total project cost, total project costs for alternatives C and D would be somewhat closer. Mitigation, again if required, should be located on the same river system within a general range from the downstream dam to approximately 3 or 4 miles upstream from the project area.

The proposed project does not appear to have impacts that would significantly affect the quality of the human environment and thus require the preparation of an Environmental Impact Statement.. The proposed project could possibly be authorized under a Nationwide Permit in accordance with 33 CFR Part 330, Appendix A. Alternatives should be considered that would reduce the amount of fill material that would be discharged into the aquatic ecosystem (for road construction, abutments, piers). Thank you for this opportunity to review your updated Environmental Assessment and consideration of our comments. We would appreciate being notified of any public meetings that may be held in relation with this proposed project.

Sincerely,

douglas d. mcdonald

Doug McDonald
Project Manager
Helena Regulatory Office

CF: FWP, Wipperman
USFWS, Hazelwood
DHES, Thomas
DSL, Norris
EPA, Blodnick

FISH AND WILDLIFE ENHANCEMENT
FEDERAL BUILDING, US COURTHOUSE
301 S PARK
P O BOX 10023
HELENA MT 59626

FWE-61130-Billings
M.17-FHWA (Swan River Bridge)

January 13, 1992

Ms. Edrie L. Vinson
Montana Department of Highways
2701 Prospect Avenue
Helena, Montana 59620

Dear Ms. Vinson:

This responds to your January 2, 1992 letter concerning Montana Department of Highways Project No. BR 9015(11), Swan River Bridge near Ferndale (C#1132), and requesting identification of the threatened and endangered species that should be considered in connection with this project. Your letter also invited other comments we may have.

The Federally-listed endangered and threatened species which occur or may occur within the project area are the bald eagle (Haliaeetus leucocephalus), peregrine falcon (Falco peregrinus) and grizzly bear (Ursus arctos horribilis). Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, the Federal Highway Administration, as the responsible Federal agency, must determine if the proposed actions may affect these endangered species. If you or the Federal Highway Administration determine that any of these species may be affected, it will be necessary to initiate formal consultation with this office. The following information and recommendations may aid you in that determination.

Both peregrine falcons and bald eagles may occur in the area as spring and/or fall migrants, and bald eagles occur as winter residents. We are not aware of peregrine falcon or bald eagle nest territories in or near enough to the project area to be of direct concern, but several bald eagle pairs nest in the general vicinity.

While we do not foresee any substantive issues with the proposed project with regard to the bald eagle and peregrine falcon, any power lines in the vicinity, if not properly constructed, could pose electrocution hazards for these species. To conserve these species and other large raptors protected by Federal law, we urge that any power lines that may need to be modified or reconstructed as a result of the project be raptor-proofed following the criteria and techniques outlined in the Raptor Research Report No. 4, "Suggested Practices for Raptor Protection on Power Lines - The State of the Art in 1981". A copy may be obtained from:

Jim Fitzpatrick, Treasurer
Raptor Research Foundation
Carpenter St. Croix Nature Center
12805 St. Croix Trail
Hastings, Minnesota 55033.

Considering the specific nature and location of the project, we do not believe there will be any project related impacts to the grizzly bear.

We have no information, at present, on the potential for the project to adversely impact wetland habitats. However, the March 2, 1987 Field Review and Planning Report accompanying your January 2 letter indicates there are adjacent wetlands. We assume a wetland inventory and impact assessment has or will be completed in accordance with the 1989, "Interagency Memorandum of Understanding: Management and Mitigation of Highway Construction Impacts to Wetlands in the State of Montana". We urge completion of any needed wetland mitigation in full accordance with that Memorandum of Understanding.

We appreciate your efforts to consider and conserve fish and wildlife resources, including threatened and endangered species. If you have questions regarding this letter, please contact Mr. Rob Hazelwood of our Helena office (406) 449-5339.

Sincerely,

John G. Wood

Dale Harms
State Supervisor
Montana State Office

JGW/jf

cc: Suboffice Coordinator, USFWS, Fish & Wildlife Enhancement (Billings, MT)
Rob Hazelwood, USFWS, Fish & Wildlife Enhancement (Helena, MT)

"Take Pride in America"

MONTANA NATURAL HERITAGE PROGRAM
1515 East Sixth Avenue
Helena, Montana 59620
(406) 444-3009

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JAN 24 1992
ENVIRONMENTAL BUREAU

January 23, 1992

Edrie Vinson
Department of Transportation
Environmental Section
2701 Prospect Avenue
Helena, Montana 59620

BR 9015 (11) C# 1132
Swan R - W of Ferndale

Dear Edrie:

In response to your request for information, we checked our databases for information on sensitive species in the vicinity of 14 proposed highway projects. To summarize the results:

Musselshell River - 1 mile east of Roundup (Control #1482):
No records

Musselshell river - 2 miles east of Ryegate (Control #1496):
No records

11 Miles SE of Libby (Control #1789):
No records

Swan River Bridge near Ferndale (Control #1132):
Two plant species of special concern occur within this project area. Beck water-marigold occurs in water up to 1 meter deep in the river just below the bridge along the north side of the river. It was last observed here in 1982 and is likely still present. This is one of six locations known for the plant in Montana. Western witchgrass occurs in a wet meadow along the river just above the bridge. It was last observed at this location in 1985 and is also likely still present. This is one of eight locations known for this species in Montana. Occurrence records are attached (pp. 1 and 2).

Judith River - 6 miles NW of Moore (Control #1494):
No records

Ross Fork Creek - 5 miles NW of Moore (Control #1495):
No records

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Common Name: BECK WATER-MARIGOLD
Scientific Name: BIDENS BECKII

Global rank: G5TU Forest Service status:
State rank: S2 Federal Status:

Element occurrence code: PDAST6A011.003

Survey site name: SWAN RIVER I
EO rank:
EO rank comments:

County: FLATHEAD

USGS quadrangle: BIGFORK

Township 027N, Range 019W, Section 32 Precision: S
Township-range comments: SE4NE4SE4

Survey date:
First observation: 1982
Last observation: 1982-07-31

Elevation: 3000
Slope/aspect:
Size (acres): 0

Location:
3.4 KM EAST OF BIGFORK, ALONG NORTH SIDE OF SWAN RIVER, BELOW BRIDGE.

Element occurrence data:
LOCALLY ABUNDANT.

General site description:
IN WATER ABOUT ONE METER DEEP, WITH MYRIOPHYLLUM EXALBESCENS.

Land owner/manager:
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:
NONE.

Information source:
SCHUYLER, A.E. (5893). 1982. SPECIMEN # 091231. MONTU.

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Common Name: WESTERN WITCHGRASS
Scientific Name: PANICUM OCCIDENTALE

Global rank: G5T? Forest Service status:
State rank: S2 Federal Status:

Element occurrence code: PMPOA24022.001

Survey site name: SWAN RIVER
EO rank:
EO rank comments:

County: FLATHEAD

USGS quadrangle: BIGFORK

Township 027N, Range 019W, Section 33 Precision: M
Township-range comments: SW4

Survey date:
First observation: 1985
Last observation: 1985-07-12

Elevation: 2950
Slope/aspect:
Size (acres): 0

Location:
ALONG SWAN RIVER, JUST ABOVE THE FERNDALE BRIDGE.

Element occurrence data:
COMMON, IN FLOWER (12 JULY 1985).

General site description:
SMALL AREA OF MOIST MEADOW, WITH CAREX OEDERI AND LYSIMACHIA CILIATA.

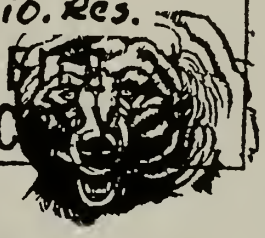
Land owner/manager:
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:
ALSO, HISTORICAL RECORD - JONES, M. F. (S.N.), 1908, MONTU; LOCATION GIVEN AS "BIGFORK," ELEVATION 3000 FT.

Information source:
LESICA, P. DIVISION OF BIOLOGICAL SCIENCES, UNIVERSITY OF MONTANA, MISSOULA, MT 59812. (3631), 1985. MONTU. (MRPP CARD).

Montana Department of Fish, Wildlife & Parks

Bio. Res.



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Region One, 490 N. Meridian
Kalispell, MT 59901
(406) 752-5501
FAX: (406) 257-0349
Ref: DV219.92
January 23, 1992

Edrie L. Vinson, Chief
Environmental and Hazardous Waste Bureau
Montana Department of Highways
2701 Prospect Ave.
Helena, MT 59620

RE: BR 9015(11) Swan River Bridge near Ferndale, Control #1132

The fishery on this portion of the Swan River contains warmwater gamefish species including northern pike and largemouth bass, and coldwater species including rainbow trout, brook trout, cutthroat trout, and bull trout. Habitat alteration should consider all species and migration of them up or downstream from the project site. More specific information will be provided when preliminary design is completed.

Wildlife concerns related to this proposed project will largely depend upon the scale of the project. In the immediate vicinity of the bridge currently are wetlands and riparian habitats (already greatly influenced by the dam) and an osprey nest. River otter occupy the swan flow above the dam and some winter use by bald eagles has been documented in the same area. Potential impacts upon these resources can be better evaluated as the scope of the project becomes better defined.

Thank you for the opportunity to comment.

Sincerely,

Dan Vincent
Regional Supervisor

Copies to Knapp & Wipperman
1/29/92

/ss

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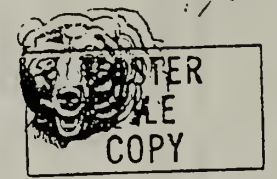
Montana Department of Fish, Wildlife & Parks

1420 East Sixth Avenue
Helena, MT 59620
June 9, 1992



cc: J Weaver
D Lovely
J. Hill

Ms. Edrie L. Vinson
Environmental and Hazardous Waste Bureau
Department of Transportation
2701 Prospect Avenue
Helena, MT 59620

Swan R.
BR 9015(11)

Dear Edrie:

9015(11) Swan R.

We have reviewed the wetlands assessments submitted by your office. The Swan River Bridge assessment looks complete. The photo documentation of wetland sites 2, 3 and 4 on the Plentywood-West project are poor and offer little in terms of site characteristics. This reconstruction project is located within the North East Montana Prairie Pothole Joint Venture project area and there are numerous opportunities to participate in wetland mitigation. We recommend that you coordinate more closely with Mark Sullivan the project coordinator in Plentywood on the different mitigation opportunities, including the contractor incentive.

F22-2(10)
Plentywood WOT

-44-1(3)14
Valier-E

The wetland mitigation recommendation for the Valier-East project needs some additional documentation before it will be approved. This information was requested during the site inspection. This includes the surface acreage of the basin that will be less than six feet in depth and in particular in the one to three foot zone; the total projected surface acreage of the impoundment; and the projected cost of the project.

82-1(2)0
SOMERS-E

The Somers East project design appears to have fairly significant impacts to some important wetland types. The large open water pothole is quite important to diving ducks, especially nesting redheads. The seasonally flooded wetlands including the borrow ditches provide some of the only winter habitat for ring-neck pheasants. Their value as nesting habitat is obviously negated when burned in the spring as the photos document. Obtaining satisfactory mitigation for these losses will be important and will require close cooperation between the agencies.

Note

We have one recommendation to make relative to the mitigation efforts underway. More work needs to be accomplished at the technical level in terms of tightening up the mitigation packages before they are brought to the full committee and reported in the ledger. If there are different options on the table for a particular project, they need to be discussed, and if the proposal is conceptual in nature, it should be so stated. We look forward to discussing these concerns at the meeting next week.

Sincerely,

Jeff Herbert
State Waterfowl Coordinator

609.2

Montana Department of Fish, Wildlife & Parks

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JUL 27 1992
ENVIRONMENTAL BUREAU

1420 East Sixth Ave.
Helena, MT 59620
July 23, 1992

cc: CORE DRILL DIST 1

Jeff Ryan
Dept. of Transportation
2701 Prospect Ave.
Helena, MT 59620

"CORE DRILL"

RE: Permit No.MDT-29C-92
BR 9015(11)
Swan River Bridge
CN #1132

Relative to the Montana Stream Preservation Act, the Department has completed our review of your proposed project on the Swan River. The project is approved as long as the following special conditions are incorporated in the final plans and specs:

1. In-stream work shall be completed in an expeditious manner to avoid unnecessary impacts to the streams,

2. Other construction activities performed in the stream and immediate vicinity, shall be conducted in a manner to reduce in-stream turbidity along with minimizing disturbances to the streambed and/or streambank,

3. Extra precautions shall be taken to preserve existing riparian vegetation,

4. Streambank and adjacent areas disturbed by the construction activity shall be protected with temporary erosion control measures during the construction activities. These areas shall be reclaimed with long term erosion control measures and revegetated immediately after construction,

5. Discharge of core material and sedmiment into the river will not be allowed.

___ This project will cause a significant increase in turbidity, therefore, the Department of Health and Environmental Sciences, Water Quality Bureau, should be contacted for an exemption from the surface water quality standards. (3-A Authorization)

_X_ This project will not cause significant turbidity and a 3-A Authorization will not be required.

Ken Chrest
Stream Protection Coordinator
Fisheries Division

drg
C: Edrie Vinson
Region 1 - Vashro
Water Quality Bureau

Montana Department of Transportation
2701 Prospect Avenue
Helena,MT 59620-9726

Stan Stephens, Governor

MASTER FILE COPY

August 10, 1992

Kenneth R. Chrest
Stream Protection Act Manager
Dept. of Fish, Wildlife & Parks
1420 East Sixth Avenue
Helena, MT 59620

Subject: BR 9015(11)
Swan River Bridge
Control No. 1132

In your recent SPA approval for the subject core drill, you required in condition No. 5 that all drilling material, cuttings, etc., not be allowed to enter the river. Would you consider dropping this restriction?

The total amount of material will be approximately three cubic yards composed primarily of clean sands and gravel. The drilling will occur from a barge and this much material cannot be contained on the barge without numerous trips to shore. Although this would be possible, we would like to avoid this effort. We would appreciate your response as soon as possible.

Edrie Vinson

Edrie L. Vinson, Chief
Environmental & Hazardous Waste Bureau

ELV:JTR:D:ENV:63.kmc

cc: James T. Weaver, P.E., District Engineer-Missoula
Core Drill
Gordon J. Stockstad, Supervisor, Resources & Permitting Section
File

An Equal Opportunity Employer

Montana Department of Fish, Wildlife & Parks

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AUG 19 1992
ENVIRONMENTAL BUREAU

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cc: J. Tulcavage
J. Hill
D. L. Larson
D. S. Johnson
J. J. Mayhew
Jim Walther

1420 East Sixth Avenue
Helena, MT 59620
August 17, 1992

Jeff Ryan
Environmental & Hazardous Waste Bureau
Dept. of Transportation
2701 Prospect Ave.
Helena, MT 59620

RE: MDT-29C-92
BR 9015 (11)
Swan River Bridge
CN# 1132

We have reviewed your request to eliminate item No. 5 of our SPA core drill permit. It was decided that the material should be removed from the river as required in the original authorization. The core drill material should not be deposited within the ordinary high water mark and not in a wetland.

Ken Chrest

Ken Chrest
Stream Protection Coordinator
Fisheries Division

C: Edrie Vinson
Region 1 - Vashro
Project File

Montana Department of Fish, Wildlife & Parks

MASTER FILE COPY

1420 East Sixth Avenue
Helena, Montana 59620

August 28, 1992

Ms. Edrie L. Vinson, Supervisor
Environmental Unit
Dept. of Transportation
2701 Prospect
Helena, MT 59620

Dear Ms. Vinson:

RE: BR 9015(11)
Swan River Bridge
Control #1132

We have reviewed your above-mentioned proposed project for providing a new bridge on a county road approximately three miles east of Big Fork

The Department of Fish, Wildlife and Parks knows of no Section 6(f) of the Land and Water Conservation Fund Act or Section 4(f) of the 1966 Department of Transportation Act impacts which would occur as a result of the proposed bridge replacement.

Thank you for the opportunity to comment. We appreciate your cooperation.

Sincerely,

Mary Ellen McDonald

MARY ELLEN McDONALD
Program Officer
Operations Bureau
Parks Division

RECEIVED
AUG 31 1992
ENVIRONMENTAL BUREAU

cc: Dan Vincent, R-1 Supervisor
Dave Conklin, R-1 Park Manager

ks

File

MDT Montana Department of Transportation
2701 Prospect Avenue
Helena, MT 59620-9726

Stan Stephens, Governor

MASTER FILE COPY

September 2, 1992

Kenneth R. Chrest
Stream Protection Act Manager
Dept. of Fish, Wildlife & Parks
1420 East Sixth Avenue
Helena, MT 59620

Subject: BR 9015(11)
Swan River Bridge
MDT-29C-92
Control No. 1132

We would like to change the core drill time period for the subject project to extend through October 9, 1992.

Edrie Vinson

Edrie L. Vinson, Chief
Environmental & Hazardous Waste Bureau

ELV:JTR:D:ENV:53.dlw

cc: James T. Weaver, P.E., District Engineer-Missoula
Terry L. Yarger, P.E., Geotechnical Engineer
Gordon J. Stockstad, Supervisor
Resources & Permitting Section
~~File~~

Montana Department of Fish, Wildlife & Parks

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SEP 9 1992
ENVIRONMENTAL BUREAU

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1420 East Sixth Avenue
Helena, Montana 59620
September 8, 1992

cc: J. Weaver
cc: DAVE HA

Jeff Ryan
Dept. of Transportation
2701 Prospect Ave.
Helena, MT 59620

RE: MDT-29C-92
Swan River Bridge
BR 9015(11)
CN #1132

Your request for core drill extension is approved.

Sincerely,

Darlene Gilchrist
for Ken Chrest
Stream Protection Coordinator
Fisheries Division

drg
C: Edrie Vinson
Region 1 - Rumsey
Project File

Montana Department of Fish, Wildlife & Parks

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OCT 26 1992
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1420 East Sixth Avenue
Helena, Montana 59620
October 22, 1992

cc: Jim Hall
Jim Weaver

Jeff Berglund
Dept. of Transportation
2701 Prospect Ave.
Helena, MT 59620

RE: BR 9015(11)
Bridge over Swan River
CN #1132

We have some concerns with the Swan River bridge plans which shows a road encroachment into the river channel.

Jack Thomas and I are scheduled to go to Kalispell on November 5. One of our stops will be to review this proposed project. If a representative from your agency would like to accompany us, please let me know.

Sincerely,

Ken Chrest

Ken Chrest
Stream Protection Coordinator
Fisheries Division

drg
C: Region 1 - Vashro

Montana Department
of
Fish, Wildlife & Parks

RECEIVED
NOV 24 1992
ENVIRONMENTAL BUREAU

cc: Jim Weaver
Jim Hill

1420 East Sixth Avenue
Helena, MT 59620
November 18, 1992

Jeff Berglund
Environmental & Hazardous Waste Bureau
Dept. of Transportation
2701 Prospect Ave.
Helena, MT 59620

RE: Swan River
Bridge Proposal
BR 9015 (11)
CN# 1132

The Region's comments for this project are enclosed. We do not want the new structure to encroach any further into the river for the reasons stipulated in Scott's memo.

Ken Chrest

Ken Chrest
Stream Protection Coordinator
Fisheries Division

C: Region 1 - Vashro/Rumsey
Project File

Montana Department
of
Fish, Wildlife & Parks

RECEIVED
NOV 18 1992
FISHERIES DIV.
DEPT. FISH WILDLIFE & PARKS

Helena

INTEROFFICE MEMORANDUM

Ref:
November

TO: Ken Chrest

FROM: SR
Scott Rumsey

SUBJECT: Swan River Bridge Proposal BR 9015(11), Control No. 1132

The proposal calls for reducing the existing bridge span of about 240 feet to 163 feet. This means 77 feet of fill will need to be placed on either side of the river to meet this requirement.

The existing bridge presently encroaches substantially on the Swan River. Additional encroachment is <u>not recommended</u> because of the following impacts:

1. Fill placement in a wetland and aquatic environment;
2. Alteration of river flow patterns and hydraulics due to encroachment;
3. Alteration and fill of spawning and rearing habitat for northern pike and juvenile trout.

/ss

Montana Department of Transportation
2701 Prosoect Avenue
Helena,MT 59620-9726

Stan Stephens, Governor

December 8, 1992

Ken Chrest, Stream Protection Coordinator
Fisheries Division
Montana Department of Fish, Wildlife, and Parks
1420 East 6th Avenue
Helena, Montana 59620

cc:
Hydraulics

Subject BR 9015 (11)
Swan River Bridge Near Ferndale
Control No. 1132

Enclosed is a copy of the Hydraulics Study concerning the length of the bridge. In it, you will find what we believe to be a sound design length of 163 feet. The adverse effects due to the shorter bridge are minimal. Below is a table comparing the two bridge designs.

	290' bridge	163' bridge
Average flow rate (based on 1166 cfs)	0.6 fps	0.9 fps
*100-yr flood increase (based on 9620 cfs)	3.4 fps	5.0 fps
Cost on THOUSANDS	$377	$212

*The backwater elevation of the 163' bridge will be 0.4 feet higher than the 290' at the 100 year event.

Based on this data, contained in the attached report, and, due to the limited funding for off-system bridges, we urge you to consider the 163' bridge design. Please contact me at 444-7632 to further discuss this project.

Edrie Vinson

Edrie L. Vinson, Chief
Environmental & Hazardous Waste Bureau

ELV:SRS:ss

cc: David S. Johnson, Preconstruction Bureau Chief
Jim C. Hill, Bridge Bureau Chief
file

Montana Department of Fish, Wildlife & Parks

1420 East Sixth Avenue
Helena, MT 59620
January 6, 1993

RECEIVED
JAN 8 1993
ENVIRONMENTAL BUREAU

MASTER FILE COPY

cc: G.L. Larson
S.T. Weaver
D.S. Johnson

Edrie Vinson, Chief
Environmental & Hazardous Waste Bureau
Dept. of Transportation
2701 Prospect Ave.
Helena, MT 59620

RE: BR 9015 (11)
Swan River Bridge
CN #1132

Dick McIntyre's December 4, 1992, memo to you reported that our agency did not see any insurmountable problems with the Swan River Bridge project when the "fill" concept was discussed with us. We would like to see any copies of the correspondence or reference to anyone in our agency who discussed the fill design with any MDT personnel prior to October 6, 1992. Scott Rumsey or Ken Chrest do not recall, nor do our files reflect any discussion with MDT on this project prior to the receipt of the proposed bridge plans on October 6, 1992.

Our first correspondence to MDT concerning this project was on January 23, 1992. It provided general fishery and wildlife information for your environmental document. Our second correspondence, dated October 22, 1992, expressed a concern about the preliminary bridge design after we reviewed the plan. These procedures follow the intent of the MOU, which states we should conduct instructional correspondence in writing.

This is the second project over the past two years that MDT has requested that we sacrifice the intent of the Stream Protection Act by allowing a further alteration of a stream beyond its natural and existing state. We understand it is MDT's intent to reduce the cost of the project, but in turn it becomes a cost to the state as a whole, due to the loss of habitat. On future projects such as this, it is requested that MDT not look only at the costs to construct a project, but give more consideration to the long term impacts on the environment.

We will approve of the project as proposed, but in lieu of the loss of habitat on this project, the access site immediately above the bridge must be maintained and we request off site mitigation for improvement of the floater take out at Bear Creek, about 4 miles upstream on the Swan River.

If you have any question, feel free to contact me.

Al Wipperman
Fisheries Division

C: Larry Peterman
Region 1 - Vashro
Ken Chrest

Montana Department
of
Fish, Wildlife & Parks

Region One - 490 N. Meridian
Kalispell, MT 59901
(406) 752-5501
FAX (406) 257-0349
Ref: SR66.93
February 19, 1993

MASTER FILE
COPY

Jeff Berglund
Department of Transportation
2701 Prospect Avenue
Helena, MT 59620-9726

Dear Jeff:

Enclosed is the information you requested. As a note, remember that the fish ladder at Bigfork Dam was sealed in June of 1990 to prevent upstream migration of lake trout and lake whitefish into Swan Lake. Prior to that time the ladder was open for upstream migration. The dam was built in 1902 and the ladder installed in the 1920s and improved in 1960. Design flaws never allowed efficient upstream passage and a ladder review conducted by Jack Osborne for Pacific Power in 1988 identified problems with the ladder. Our position at the time was to encourage renovation of the ladder by Pacific Power. They evaluated the project and were moving forward until we identified the threat of lake trout and lake whitefish movement into the Swan. Our position now is to block upstream migration of these species that will jeopardize the existing fishery.

I hope this information meets your needs.

Sincerely,

Scott Rumsey
Fisheries Biologist

/ss

Montana Department of Fish, Wildlife & Parks

JUL 21 93

MASTER FILE COPY

July 20, 1993

Shannon Schultz
Environmental & /Hazardous Waste Bureau
Montana Department of Transportation
P O Box 201001
Helena MT 59620-1001

cc BIO
WEGNER
~~Ford~~
HILL
JOHNSON

Subject: Swan River Bridge near Ferndale
BR 9015(11), Control #1132

The purpose of this correspondence is to define the current situation of the Department's mitigation request for the proposed bridge project on the Swan River at Bigfork. I have discussed this topic with the Stream Protection staff in the Helena office and with the regional personnel. The decision on this matter is left to the Regional Supervisor (Dan Vincent). Therefore, the following points are the preliminary recommendation for mitigation.

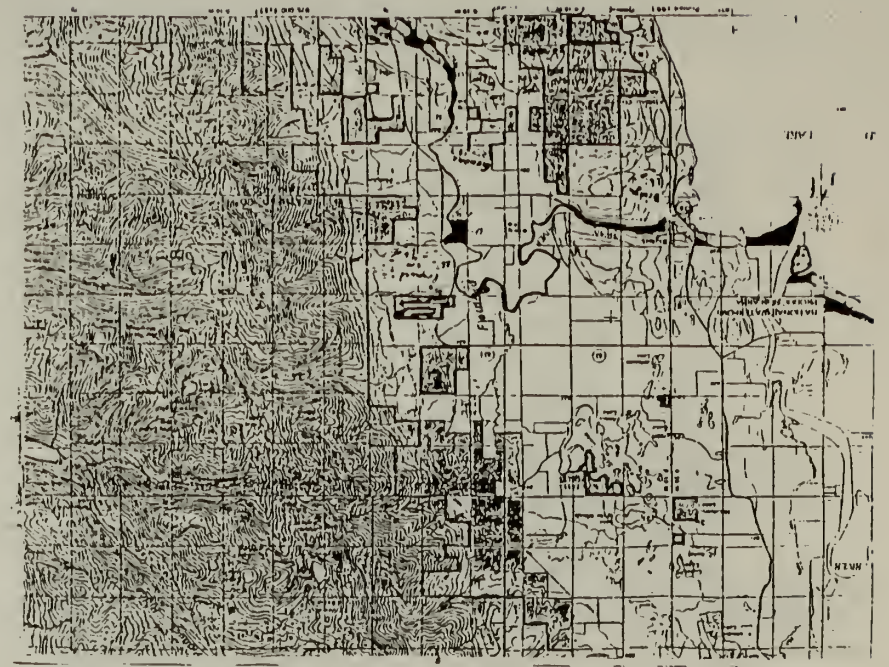
1) The intent of the Stream Protection Act would be sacrificed because the extensive fill incorporated in the initial design (memo from Al Wipperman, 1/6/93).

2) If the proposed project proceeds, it was suggested that the water access point located immediately above the bridge be maintained.

3) Since the MDFWP was unable to locate potentially positive habitat projects in the immediate vicinity of the bridge construction, it was suggested that a floater take-out improvement be considered in the vicinity of Bear Creek.

4) If the floater take-out is pursued, the scope of the access project is intended to be minimal. The specific site envisioned in this proposal, already exists as a highway turn-out. The improvements should be limited to leveling the existing slope between the river and the highway turn-out and possibly making minor adjustments to the shoreline for easier boat landing. The purpose of these modifications is to allow easier boat carry out. This area is predominantly used as a canoe take-out point for floats originating from Swan Lake or the MDFWP Swan River Fishing Access Site (see the attached map).

It is important to realize that the final bridge plans have not been submitted to MDFWP for approval. Therefore, no permit (with the mutually agreed on mitigation) has been issued.



The Department realizes that is not the traditional approach to stream protection. In this case, we appear to have very few options. This work should not be excessively costly and should be an asset to the area.

I hope this clarifies any confusion on this matter.

Sincerely,

Bruce J. Rehwinkel
Fisheries Division

c: Dan Vincent
Jim Vashro
Scott Rumsey
Ken Chreist
Al Wipperman

Montana Department of Fish, Wildlife & Parks

ER
FILE COPY

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FEB 03 1994
ENVIRONMENTAL BUREAU

Region One, 490 N. Meridian
Kalispell, MT 59901
(406) 752-5501
FAX: (406) 257-0349
Ref: DV205.94
February 1, 1994

cc: Jim Weaver
Reconstructi

Gordon Stockstad
Environmental and Hazardous Waste Bureau
Montana Dept. of Transportation
2701 Prospect Avenue
P.O. Box 201001
Helena, MT 59620

Dear Gordon:

RE: Comments pertaining to the Environmental Assessment for BR 9015(11) Swan River Bridge - West of Ferndale

In review of the environmental assessment, the Department feels that selection of alternatives A, B or D will be the most desirable in regard to fish and wildlife resources in the area. Alternative C requires additional encroachment on the river channel further altering it's natural state and the associated habitat.

Thank you for the opportunity to comment.

Sincerely,

Daniel P. Vincent
Regional Supervisor

/ss

State Historic Preservation Office

Montana Historical Society
1410 8th Avenue • PO Box 201202 • Helena, MT 59620-1202 • (406) 444-7715

MASTER
FILE
COPY

February 4, 1994

Gordon J. Stockstad, Acting Chief
Environmental and Hazardous Waste Bureau
Montana Department of Transportation
2701 Prospect Avenue
P.O. Box 201001
Helena, MT 59620

RE: Environmental Assessment
BR9015(11) Swan River Bridge

Dear Gordon:

Because we've fielded so many calls from area residents about the project identified above and are working on a National Register of Historic Places nomination for the Swan River Bridge, we reviewed the Environmental Assessment developed for the project. I thought I'd quickly let you know our thoughts on that document.

The language on page 19 under "5. Archaeological and Historical" does not, as I read it, afford the public as accurate a look at the situation as I'd recommend. First, our comments do not constitute "clearance to construct." We comment on identification measures, the eligibility of resources, and an agencies finding of effect. Second, given the lapse in time between 1987 and 1988 and a December 1993 environmental document, I believe that cultural resource work for this project needs to be handled under the Programmatic Agreement for Treatment of Historic Roads and Bridges in Montana. The Agreement was signed in June 1989. Since the agreement substituted the development of a variety of products and strategies for regular Section 106 procedures for actions as they affect historic roads and bridges, this EA should not describe bridge eligibility or ineligibility. In other words, I recommend that the EA refer to the Programmatic Agreement and its direction for bridge rehabilitation to always be considered carefully, rather than refer to a single course of action under regular 36CFR800 procedures.

As important asides, the Programmatic Agreement work on historic bridges has documented how few metal truss system bridges survive in Montana–rendering all the remaining ones more important. Also, our Office is in the process of nominating the bridge for the Register under both Criteria A and C.

Thanks, Gordon!

Sincerely,

Marcella Sherfy
State Historic Preservation Officer

File: COMP, MDOT and NR, Flathead County–pending

Kathy Huppe
May 25, 1988
Page 2

many years before. Mitzi Rossillon dug a test pit here east of the bridge, 5 meters south of the water's edge, and 20 meters northeast of the center of the driveway. She found disturbed stratigraphy, 5 cm of humus; 5 cm of ash, 4 cm orangish brown silty sand, a smear of dark brown with high organic material; more orangish silt the next 2-3 cm, but slightly lighter in color; and then grayish sandy silt, probably insitu material. The natural river's edge would have been very steep here, and most likely it was unsuitable for human habitation.

The county road connecting the bridge to FAS 209 is cut in the spoils of the secondary road construction. I walked the cut bank and observed large boulders intermixed with fill. A few broken bottles were in the ditch. No artifacts of earlier vintage were identified. Still on the south side, and to the west of the bridge, the hillside to the water's edge was steep, and large boulders cluttered the surface. Mitzi Rossillon scraped the duff from the surface about 2 meters from the county road. No artifacts were observed in the grayish dirt. Ten meters further west, she cleared away the duff, and again found no artifacts. I am completely convinced that the area was totally disturbed by previous construction work.

I walked to the north bank, crossed the bridge and confirmed that the approach road to the bridge was fill material. I returned along the opposite side of the road and again was sure only fill material was visible in the project area.

I recommend that you give clearance to proceed with this project as in compliance with Section 106 of the Historic Preservation Act. If you have any questions, please call and discuss them with me so that we can expedite the review process. Thank you.

Edrie Vinson

EDRIE VINSON, ARCHITECTURAL HISTORIAN
ENVIRONMENTAL UNIT

EV:cm:2/y

Enclosures

cc: S. C. Kologi
M. H. Ringlie
K. F. Skoog
V. D. Borden

DEPARTMENT OF HIGHWAYS

STATE OF MONTANA

May 25, 1988

Kathy Huppe
State Historic Preservation Office
225 North Roberts
Helena, MT 59620

BR 9015(11)
SWAN RIVER, FLATHEAD COUNTY

The Swan River bridge is located on a county road that connects with FAS 209 about 2 miles east of Big Fork. The bridge was constructed in 1911 by A.T. Bayne and Company, and has been recorded as SHPO #223, priority 3. It was not considered eligible for listing on the National Register.

From the bridge, facing upstream or east, one can see the stone filled crib log structures that probably served as foundations for piers for this or an earlier bridge that was situated with a considerable skew. The historic record makes no mention of a previous structure or the moving of this one.

In 1964, FAS 209 was reconstructed. It passes the project area along a steep north facing slope. Construction entailed cutting into the slope to form the road bed, and the spoil material was piled down slope (north) toward the river. Just west of the bridge the slope was so precipitous as to require riprap, which was formed of the large boulders made available from blasting to construct the road. In short, the entire south side of the project area has been altered by road construction and by bridge relocation.

The north side of the Swan is shallow, swampy during low water, and the county road that follows it is cut from the south slope of a hillside. An approach road to the bridge was constructed of fill materials, probably those resulting from road construction along the slope.

I walked the south side project area in intervals ranging from 10 to 25 meters, depending on the accessibility of the terrain. Visibility was poor due to heavy undergrowth, deciduous trees (probably willow and aspen) and cedar. Ground surface was bare along a narrow driveway or dirt road leading upstream to a private cabin, and in the vicinity of a boat unloading road next to the bridge. Near the boat facility was an informal camping area and a fire pit indicated recent and frequent use. Near here, the old bridge approach would have been located, and I speculated that the site had been filled in

Montana Department of Transportation

MASTER FILE COPY

February 16, 1993

Jack G. Thomas
Environmental Programs Supervisor
Water Quality Bureau
Cogswell Building
1400 Broadway
PO Box 200901
Helena, Montana 59620-0901

Subject: Swan River Bridge - West of Ferndale
BR 9015 (11)
Control No. 1132

In response to your February 9th letter, MDT is currently doing an Environmental Assessment (EA) on this proposed project. Consequently, an individual 404 Permit will be required instead of a Nationwide 404 Permit.

You and the people who were carbon-copied have been added to the distribution list of the EA when it is completed. There will a formal Public Hearing for the public to review and comment on it before it is final. You can expect this EA to come out around June or July.

Edrie Vinson

Edrie L. Vinson, Chief, Environmental & Hazardous
Waste Bureau

cc: Jim Hill
Jim Weaver
Gordon Stockstad
file

State Historic Preservation Office
Montana Historical Society
Mailing Address: 225 North Roberts • Helena, MT 59620-9990
Office Address: 102 Broadway • Helena, MT • (406) 444-7715

June 8, 1988

Ms. Edrie Vinson
Architectural Historian
Environmental Unit
Montana Department of Highways
2701 Prospect Avenue
Helena, MT 59620

Re: Swan River Bridge
BR9015(11)

Dear Edrie:

Since no significant cultural resources were identified as a result of your survey for the project referenced above, bridge replacement should be able to proceed without impacting Register eligible properties.

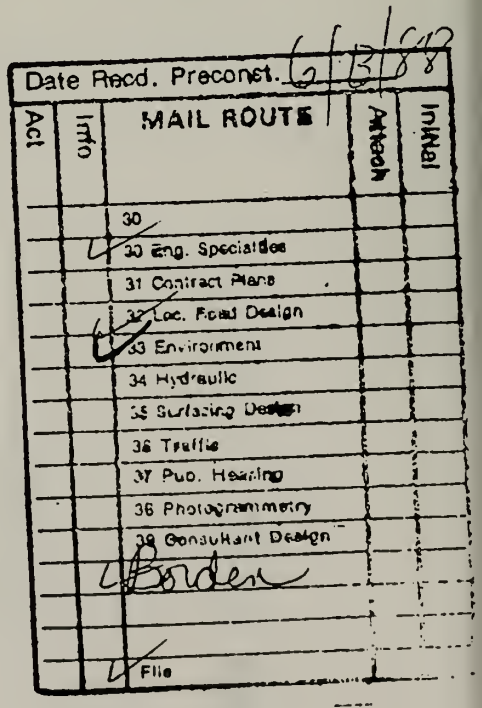
Thank you for consulting with us.

Sincerely,

Kathy

Katherine M. Huppe
Historical Survey Reviewer

File: MODH/Swan River Bridge



FLATHEAD COUNTY ROAD DEPARTMENT
Mailing Address: 800 S. Main
Delivery Address: 1249 Willow Glen Drive
Kalispell, Montana 59901
Phone [illegible]
758-5790

MASTER FILE COPY

cc: Jim Weaver
Joel Marshik
Karl Helvick
Shannon Schultz

January 25, 1994

RECEIVED
FEB 3 1995

John Axline
Environmental Services
Capital Building
Helena, MT 59620

RE: Swan River Bridge

Dear Mr. Axline:

On October 27, 1994, we met with Mark Wilson of the Bigfork Development, Mona Brock, Neil Brown and Bob Norwood of the County Parks Department. We had met with them about accepting responsibility and ownership of the Swan River Bridge, and at that time they would not accept responsibility or ownership.

We also contacted PacifiCorp of Portland, OR, in October, about accepting responsibility and ownership because they own the majority of the land around the Bigfork reservoir. PacifiCorp did say they would not take responsibility.

We met with Mona Brock to see if the residents of the Swan River Bridge area would be interested in taking responsibility. Jack White, landowner of the NE corner, did say he would donate land for the new bridge.

The Montana Historical Society also would not accept responsibility of the Swan River Bridge.

If you have any further questions, please feel free to call.

Sincerely,

Jack L. Lingle
Bridge Supervisor

JLL:pdv

DEPARTMENT OF
HEALTH AND ENVIRONMENTAL SCIENCES
WATER QUALITY BUREAU

STATE OF MONTANA

PHONE: (406) 444-4549
FAX: (406) 444-2406

ROOM A-201
1400 BROADWAY
Room A-206

PO BOX 200901
HELENA, MONTANA 59620-0901

January 26, 1994

Gordon J. Stockstad
Acting Chief - Env & Hazardous Waste Bureau
Montana Dept of Transportation
2701 Prospect Ave
PO Box 201001
Helena MT 59620-1001

RECEIVED
FEB 03 1994
ENVIRONMENTAL BUREAU

SUBJECT: Environmental Assessment
BR9015(11)
Swan River Bridge - West of Ferndale, Montana
Control No. 1132

Dear Gordon:

Thank you for the opportunity to respond to the subject environmental document.

The document appears to adequately address the major Socio - Economic issues associated with alternatives A-D.

Alternative D appears to be the least potentially environmentally damaging of the action options. However, I will reserve a final decision until a preliminary design of both Alternatives C and D is available for our examination.

Apparently the same amount of wetlands will be impacted by both alternatives C and D. While the total anticipated wetland impacts are relatively small at the bridge site, the cumulative impacts associated with increased development in the Region could present problems. Because of this I suggest any wetland mitigation for this project be selected as near the impact site as possible, minimally in the same watershed, and fully functional before bridge construction commences.

Sincerely,

Jack Thomas

cc: FWP, Peterman
USFWS, Hazelwood
DSL, Norris
EPA, Blodnick

"AN EQUAL OPPORTUNITY EMPLOYER"

Flathead County
Board of Commissioners
(406) 758-5503

Howard W. Gipe
Sharon L. Stratton
Robert W. Watne

2800 South Main
Kalispell, Montana 59901
Fax (406) 758-5861

Marron
Joe Kolman
Joel Marshik

5-1-95 JTW Apples

MASTER FILE COPY

April 25, 1995

Mr. James T. Weaver
District Engineer
Montana Department of Transportation
P. O. Box 7039
Missoula, Montana 59807-7039

4

Re: Swan River Bridge - West of Ferndale, Montana
Control # 1132

Dear Sir:

Please be advised that the Flathead County Board of Commissioners take the following position relative to the above referenced bridge.

Once the new bridge is in place and operational, Flathead County does not, in any way, wish to retain ownership of the old bridge. We do not want to retain any liability and if no one else is inclined to accept ownership and the accompanying liability, it is our position that the old bridge should be totally removed.

If you have any further questions regarding this project or need any further clarification of our position, please feel free to contact this office.

Sincerely,

FLATHEAD COUNTY BOARD OF COMMISSIONERS

Howard W. Gipe - Chairman

Sharon L. Stratton - Member

Not Available for Signature
Robert W. Watne - Member

MAY 30 1995

Montana Department of Transportation
Helena, Montana 59620-1001

Memorandum

To: Joel M. Marshik, P.E., Manager
Environmental Services

From: Thomas J. Barnard, P.E.
Administrator, Engineering Division

Date: May 25, 1995

Subject: BR 9015(11)
Swan River - W of Ferndale
CN 1132

This is to advise you that this is a county bridge, owned and maintained by Flathead County. The county has indicated in their letter of April 25, 1995 that they "do not, in any way, wish to retain ownership of the old bridge."

The State's obligation during this project is to perform preliminary and construction engineering, acquire permits and right of way and provide construction supervision.

After construction the county will own and maintain the new structure. The State will not accept responsibility or liability for the old bridge either in its present location or a new location.

TJB:JPK:mmb/memo5.25

cc:Tim Reardon
Joe Kolman

MAY 23 1995

Montana Department of Transportation
Helena, Montana 59620-1001

Memorandum

To: Timothy W. Reardon
Chief Legal Counsel

From: Joseph P. Kolman, P.E.
Bridge Engineer

Date: May 22, 1995

Subject: Ferndale Bridge

This is in reference to your memo of May 15, 1995 requesting additional information concerning this project.

1. FHWA has determined that the bridge will still qualify as historic if it is moved off-site.
2. The existing right of way is an easement in the name of Flathead County. At least a portion of the easement is for a "public highway or county road only". The deed contains a reverter clause stating that when the land is not used for a road it reverts to the grantor or assignees. Therefore, it may not be possible to transfer the right of way to another entity.
3. If the bridge is maintained in place, the entity accepting responsibility would have to accept liability. FHWA would also like to have them purchase a bond to cover the cost of eventual removal of the bridge.

Flathead County has stated that they do not want to retain ownership or liability for the existing bridge in any way (see attached letter).

If you need any additional information to aid in preparation of a draft agreement, please call me.

JPK:mmb/memo5.22b

cc: Joel Marshik
file

MONTANA DEPARTMENT OF TRANSPORTATION
Environmental Services

2701 Prospect Avenue
PO Box 201001
Helena, MT 59620-1001

Marc Racicot, Governor

MASTER FILE COPY

July 5, 1995

MONTANA DEPARTMENT OF NATURAL RESOURCES
& CONSERVATION (DNR&C)
NorthWestern Land Office
P. O. Box 7098
Kalispell, MT 59904-0098

Attention: William O'Brien,
Area Manager

Subject: BR 9015(11)
Swan River (1 mi. WNW. of Ferndale,
P.M.S. C#1132)

This is to request the MONTANA DEPARTMENT OF NATURAL RESOURCES & CONSERVATION (DNR&C, formerly the DEPARTMENT OF STATE LANDS/DSL) to be a Cooperating Agency on this proposed project in accordance with the U.S. DEPARTMENT OF TRANSPORTATION's Federal Highway Administration (FHWA) regulations under 23 CFR 771.111(d). The MONTANA DEPARTMENT OF TRANSPORTATION (MDT) is also requesting information from DNR&C to be used in the preparation of the environmental documentation on this proposed project.

This proposed project is located on a DNR&C-defined "navigable reach" of the Swan River, and an easement or license from the DNR&C will be necessary for construction. The current crossing was built for Flathead County in 1911, and has no "easement number". This is located in the East ½ of the SouthEast ¼ of Section 32; Township - 27 - North, Range - 19 - West, M.P.M. This is on a country road approximately 1 mile west-northwesterly of Ferndale in Flathead County.

Attached are ROUGH DRAFT copies of the Environmental Assessment and "Nationwide" Programmatic *Section 4(f)* Evaluation for this proposed bridge replacement project. Please indicate the following:

- Are there any specific leases or land uses by the DNR&C that may be adversely impacted by, or that should be considered for this proposed project?
- If the DNR&C's land may have present or planned usage covered under *Section 4(f)* of the 1966 *DEPARTMENT OF TRANSPORTATION Act* (49 U.S.C. 303).

An Equal Opportunity Employer

(Cooperating Agency information request - conclusion:)

These include lands that are publicly-owned and managed significant parks, wildlife refuges, or recreation areas. It also includes sites eligible for inclusion, or in the NATIONAL REGISTER OF HISTORIC PLACES (NRHP) under *Section 106* of the *National Historic Preservation Act* (**16 U.S.C. 470**). The existing bridge has been listed on the NRHP since last July.

- Have any of the **DNR&C**'s lands in this proposed project's vicinity been purchased, improved, and administered for recreational purposes under *Section 6(f)* of the *National Land & Water Conservation Fund Act* (**16 U.S.C. 460**)?

- Does the **DNR&C** have any ongoing or presently planned projects for this area that could affect, or be affected by this proposed project? Is the **DNR&C** also aware of any current or proposed projects by others (public agencies or private parties) that present similar conditions?

A written response to this ROUGH DRAFT environmental document review and Cooperating Agency/information request is needed for the environmental documentation on this proposed project. A response on these matters may result, if necessary, in further inter-agency coordination to avoid or minimize potential project impacts. This response is requested to be in this office by **July 24, 1995**.

Please reply to this office at the address on the first page's "letterhead", or phone 406-444-7228 if there are any questions about this request.

Joel M Marshik

for Joel M. Marshik, P.E.
Environmental Services Manager

JMM:KMH:asj:[*.SWAN]NRC-REQ.LET

Attachments

CC: James T. Weaver, P.E. - MDT Missoula District Administrator (№ 1)
Joseph P. Kolman, P.E. - MDT Bridge Engineer
Thomas E. Martin, P.E. - MDT Right-of-Way Engineer
Timothy W. Reardon, Chief Counsel - MDT Legal Services
Joel M. Marshik, P.E. - MDT Environmental Services Manager
Gregory P. Hallsten, Environmental Coordinator - DNR&C, Helena
Dale W. Paulson, Environmental Coordinator - FHWA Montana Division

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

MARC RACICOT, GOVERNOR

STATE OF MONTANA

MASTER FILE COPY

DIRECTOR'S OFFICE (406) 444-2074
TELEFAX NUMBER (406) 444-2684

RECEIVED
JUL 27 1995
ENVIRONMENTAL BUREAU

Northwestern Land Office
2250 Highway 93 North
Kalispell, MT 59901-2557
(406)752-7994

July 26, 1995

433.6
Swan River
Section 32, T27N, R19W

Mr. Joel M. Marshik
Environmental Services Manager
Montana Department of Transportation
PO Box 201001
Helena, MT 59620-1001

Dear Mr. Marshik:

This letter is in response to your cover letter of July 5, 1995 attached to the ROUGH DRAFT EA for the Swan River Bridge BR 9015 (11) project.

- There are no Department of Natural Resources and Conservation leases or licenses near the proposed bridge project. Since the Swan River is classified as navigable stream, the State owns the Swan River bottom below the low water mark.

- The DNRC does not have any present or planned usage covered under Section 4(f) of the 1966 Department of Transportation Act (49 U.S.C. 303).

- The DNRC does not have any recreational facilities in the near vicinity of the Swan River Bridge. This does not mean that other State Agencies may own or manage lands near the bridge.

- The DNRC does not have any immediate future plans for the area that would be affected by the proposed project.

When the MDOT applies for the right of way to cross the Swan River for the bridge project, a copy of the final Environmental Assessment should accompany the application forms and project plans. Several months lead time is necessary for the processing and obtaining approval of the request, so the MDOT should allow enough lead time for the DNR&C to process the application.

If you have any questions, you can contact me at 756-6575 or stop by the Kalispell Unit Office, 2250 Hwy 93 N., Kalispell.

Sincerely,

William F. Wright
Kalispell Unit Manager
Northwestern Land Office
Department of Natural Resources and Conservation

cc: KU Cal File
433.6 (NWLO/KU)
Fairbanks

Appendix C: Public Meeting Comments

D 1127 R3
Karl.

Lajoie
Jim Hill
Dick McIntyre

RECEIVED
JAN 25 1993
MDT - MISSOULA

1-15-93
C

CN 1132

RUSSELL COMPANY
AL & KAY

No.81-0408431
(406)837-4279

289 Swan Retreat
BigFork, Mt. 59911

****

January 21, 1993

Montana Dept. of Transportation
P. O. Box 7039
Missoula, Mt. 59807

Certified # P771 401 913

Att: James T. Weaver, P.E.
District Engineer

Dear Mr. Weaver,

Thank you for conducting the recent public meeting regarding the old bridge on the Swan River east of Bigfork.

Our family began crossing this bridge almost on a daily basis since December of 1967 and, without question, a new facility is needed. We support the use of Federal®State funding to build a new structure. The bridge is worn out! By the nature of my work, I use all bridges in Flathead County as well as all bridges in three adjacent counties.

We must not repeat what a special interest group did, with the help of the Lake County Commissioners, on a bridge upstream on the same river in Lake County. This bridge was closed as being unsafe for a long time as Lake County did not have the monies to take care of the needed repairs.

The group finally applied enough pressure so that a band-aid repair approach was used. The bridge went from two lane to one lane with a height restriction and a small load limit & is worthless except to foot traffic and passenger vehicles. It does not meet the needs of the tax payers &, will not, until it has been replaced.

Bigfork is blessed with an outstanding Fire Dept., a QRU, a public school bus system & a county road crew. This excellence did not just happen, it was created by the hard work of many citizens. For them to receive these services, the providers are required to detour for miles & miles because of the old bridge. The bridge is 82 years old!

The line crew trucks of PPL & REC can not use the bridge. TCI can not, UPS probably not. Local contractors can not. Neither can the garbage or septic services or anything greater than 3 ton including a pickup full of firewood. The bridge is not worth repairing &, any repair in short, is a waste of dollars!

If the Bigfork Fire Dept., is assisting the Creston unit & my home catches on fire, the Ferndale unit will assist the Bigfork area & me. For them, its 3 miles via a new bridge vs a 12 mile detour because they can not use the old bridge. If the anti new bridge group drags out this needed construction, & my home burns down as a result of an unnecessary detour, they will be faced with litigation. Plain & simple.

I have faith in the judgement of the our County Commissioners &, like me, they know that a fire truck, a snow plow, a school bus, & a dump truck must have priority over any historical interests. The priorities must be & will be measured by the needs of the majority. The bridge was designed for Model A traffic. These vehicles, like old bridges, are in short supply. Let us pray that we are not required to restore & resort to the Model A & T again for the sake of history.

Jim, as an engineer, you know a new bridge is needed. The bridge & the approaches, in my opinion, must be designed to a handle the waters of a 100 year flood. I request that a study be made to determine the potential run off to support the design. The study should be easy as the USGS has an upstream gauging station & I ask that you provide me with a copy of this report.

The Swan River drains 671 square miles, or just over 18 townships & high water occurred in 1894, 1910, 1926, 1933, 1947, 1964, & 1974. High water occurs on an average of every 11.4 years so we are certainly over due. In 1991 we had the right chemistry but a flood just did not happen. Three over flights have been taken in the last 30 years & these aerial photos clearly identify the flood plain. Since 1980 many new homes have been built in the flood plain upstream &, new bridge or not, these people are going to be in for a major surprise at some time in the future.

I was not here in 1947 but am aware of the high water in 1964 & 1974. In about 1972, the Flathead county road dept., decided to pave from the old bridge to Bermels Store. Prior to then there was no north approach & high water passed under & around which, of course, closed the road.

The road dept., elected to build the north approach without a proper run off design against the will of the citizens. A group of concerned people put the county commissioners on notice of potential property damage & a copy of the document was filed with the clerk & recorder. The poorly designed north approach, in their opinion, created a head gate affect which allowed water to raise & back up on an established pond elevation that already existed by the PPL dam down stream. A second fear is that trees or a building could lodge underneath the old structure in high water adding to further elevation problems.

I live up stream about 2 miles from the old bridge. The 1974 high water was 6" lower at my place thaw the high water of 1964. However, the records clearly show that the 1964 flood had significantly more volume, both at West Glacier & in the Swan. The group felt that the north approach created a dam & allowed the semi-controlled river level to rise unnecessarily constituting negligence by design. That negligence, if any, would be the responsibility of the road dept., if property damage occurred. So far so good, no flood & no damage.

Neither you, nor I, have no way of knowing if its going to rain 40 days & 40 nites again but we both know that it will rain & snow in the Swan Valley every year. With the right combination, the river will flood again & again. Most of the townships are at higher elevation containing the snow pack along the Mission & Swan Mountain ranges.

The new construction must be designed to handle a 100 year flood. Nothing more, nothing less. If the proper study & design is not made & upstream property damage results because of this, the Federal, State & County agencies will be faced with litigation.

Please call or write if we can be of further assistance.

Sincerely,

Al Russell

Al Russell

c.c. Flathead County Commissioners
c.c. Flathead County Attorney
c.c. Flathead County Bridge Dept.
c.c. Flathead Clerk & Recorder
c.c. Flathead Conservation District
c.c. State Water Operations Bureau
c.c. Fish, Wildlife & Parks
c.c. Brandewie
c.c. Bigfork Eagle

Appendix D: Biological Resources Report and Wetlands Finding

MONTANA DEPARTMENT OF TRANSPORTATION
Biological Resources Report

Swan River Bridge - West of Ferndale
Federal Aid Project BR 9015(11)
Control Number 1132

October 25, 1993

EXECUTIVE SUMMARY

The primary intent of the proposed project is to improve the existing bridge over the Swan River located approximately 1.8 miles northwest of Ferndale. The "build" alternatives include rehabilitation of the existing structure or construction of a new bridge. Sensitive biological resources present in the project vicinity include water marigold (a plant species of special concern) and an osprey nest. Neither of these resources should be significantly affected by any of the "build" alternatives. No significant impacts to general wildlife, vegetation, or fisheries communities (including westslope cutthroat and bull trout) would result from the project. It is the determination of this report that the project, under any of the 4 alternatives, is not likely to adversely affect the bald eagle, and will not affect the peregrine falcon, grizzly bear, gray wolf, or water howellia. Approximately 0.14 acres of wetlands would be filled under either of the new bridge alternatives. No onsite wetland or fisheries habitat mitigation opportunities have been identified. Implementation of Alternative A, the "no build" alternative, would cause the least impacts to biological resources over the short term, followed by (in order of increasing impact) Alternative B (bridge rehabilitation), Alternative D (new 290-foot bridge), and Alternative C (new 163-foot bridge).

The following mitigation/coordination measures are required:

- The contractor shall contact an MDT biologist to assess the overall status of nesting bald eagles in the project area prior to the onset of construction.
- The location of construction-related activities, such as staging, batch plant, and borrow/gravel source activities, must receive prior review from an MDT biologist.

Additional measures to reduce impacts to biological resources are included in the body of this report.

PROJECT and GENERAL AREA DESCRIPTION

The proposed Swan River bridge project is located in Flathead County, approximately one mile northwest of Ferndale and three miles east of Bigfork. The surrounding area is a mix of coniferous forest and pastureland, ranges from flat to rugged terrain, and is used primarily for forestry, agriculture, and recreation. Residences and recreation and logging roads are scattered throughout the project area.

The existing 82-year-old bridge consists of a 16.5 foot-wide timber deck, two concrete piers, timber approach spans/abutments, and a steel-framed truss.

Alternatives under consideration include:

A - Leaving the existing structure as is ("no build" alternative);
B - Rehabilitating the existing structure;
C - Replacing the existing structure with a new 163-foot bridge; and
D - Replacing the existing structure with a new 290-foot bridge.

These alternatives are briefly described below.

Alternative A.
Under this alternative, the existing structure would be left as is; no improvements would be implemented.

Alternative B.
This alternative would consist of rehabilitating the existing bridge by salvaging its usable parts and installing new members and pieces where required. Bridge length, alignment, and truss configuration would remain as they are. Timber structures on the approach spans, stringers, and deck would be replaced. A sub-surface investigation of the pier footings and foundations would need to be performed if this alternate were selected; rehabilitation, modification, or replacement or these structures may be required. Lead-based paint on the bridge would be removed.

Alternative C.
Under Alternative C, a new 163-foot concrete 2-pier bridge would be constructed. The alignment would be shifted about 10 feet downstream of the existing bridge. The shortened bridge span would require the placement of approximately 4000 cubic yards (cy) of fill material into the river as new approach embankment. Bridge approaches would be realigned to reduce the severity of existing curves.

Alternative D.
Alternative D would consist of replacing the bridge with a new 290-foot concrete bridge. This proposal would be similar to Alternative C, although no additional fill (beyond existing conditions) would be required at the abutments. The longer span would require thicker beams, two to three piers, and further realignment of bridge approaches.

STUDY METHODS

Agency Consultation and Literature Review

Requests for information pertaining to endangered, threatened, and sensitive plant and animal species were sent to the Montana Department of Fish, Wildlife & Parks (MDFWP) and the Montana Natural Heritage Program (MNHP). Additionally, MDFWP and U.S. Fish and Wildlife Service (USFWS) biologists and university staff familiar with the project area were interviewed (Flath, Rumsey, Shelly, Schuyler pers. comms.). A review of pertinent literature was conducted, and the Montana Rivers Information System (MDFWP 1988) was [illegible]d regarding the subject reach of the Swan River.

Field Survey

Reconnaissance-level field surveys were conducted in December 1992 and January, March, and April 1993. The immediate project area was examined on foot while surveying for wildlife and sign, such as tracks, scat, and nest structures. Driving surveys were conducted along roads which parallel Swan River to the north and south in the project vicinity. Observation points were established on the bluff south of the river and manned for one day in March and one in April to monitor bald eagle activity in the immediate project area.

The original wetland survey was conducted in April, 1992. Supplemental delineations were conducted in fall, 1993. The wetland delineations were conducted in accordance with The 1987 Corps of Engineers (COE) Wetlands Delineation Manual and the Interagency Memorandum of Understanding: Management and Mitigation of Highway Construction Impacts to Wetlands in the State of Montana. The indicator status of vegetation was derived from the National List of Plant Species that Occur in Wetlands: Northwest (Region 9) (Reed 1988).

STUDY RESULTS

Terrestrial Resources

General Description. According to a vegetation classification system developed by Payne (1973), the general project area is dominated by western larch/Douglas-fir forest. Adjacent to the bridge, the forested/riparian community is dominated by western red cedar, grand fir, lodgepole pine, and paper birch. Understory species include western serviceberry, snowberry, and kinnikinnick. Wetland vegetation is described in the Wetlands section of this report.

Wildlife species inhabiting the general project area are typical of those which occur in forested areas of the northern Rocky Mountains. According to Thompson (1982), 62 mammalian, 6 amphibian, and 5 reptilian species have been observed or are likely to occur in the latilong (an approximate 3000 square-mile block of land measuring one degree latitude by one degree longitude) containing the proposed project. Bergeron and others (1992) have compiled sightings of 230 bird species (142 breeding species) in the quarter latilong in which the project occurs.

Species occurring in the immediate project area primarily consist of those which are associated with riparian or riverine habitats. Red squirrels were commonly observed in the project area. No large mammals were observed during the survey; however, according to the Montana Rivers Information System, the Swan River corridor between Swan Lake and Flathead Lake provides important year round range for whitetail deer, and is moderately used during spring by mule deer. Deer scat was observed along the river on both ends of the bridge. Black bear and mountain lion also occur year round in the river corridor. Other likely mammals in the project area include beaver, muskrat, raccoon, mink, striped skunk, and river otter. According to MDFWP (1992a), river otters occupy the Swan River above the dam. Although muskrats were seen on several occasions, no otter dens or beaver or muskrat lodges were observed near the bridge during

the survey.

Birds likely to occur in the area include belted kingfisher, double-crested cormorant, great blue heron, bald eagle, osprey, and a variety of swallows, swifts, and waterfowl. Species observed in early April included hooded merganser, common merganser, mallard, Canada geese, American robin, varied thrush, black-capped chickadee, Barrow's goldeneye, dark-eyed junco, pileated woodpecker, and red-tailed hawk.

Two occupied osprey nests occur in the immediate project area; several others occur downstream of the project. The closest nest is situated on a power transmission pole approximately 300 feet north of the bridge. The second nest is approximately 400 to 500 feet south of the bridge on the forested bluff south of the highway. A third osprey nest structure, located about 1000 feet downstream of the bridge on the south shore, was occupied by a Canada goose during the March and April surveys.

Herptiles in the project area likely include long-toed salamander, Pacific treefrog, spotted frog, painted turtle, and common garter snake. No herptiles were observed during surveys.

Rare & Sensitive Species. A search of the MNHP database revealed occurrences of two plant species of special concern in the project area: water marigold (Bidens beckii) and western witchgrass (Panicum occidentale) (MNHP 1992). Each of these are on the MNHP "watch" list, which includes species considered too common to be listed as "sensitive", but for which information is lacking. However, each species has been assigned a state rank of S2, which indicates that they are considered imperiled in Montana due to rarity of populations (6 to 20 statewide occurrences).

Water marigold was discovered downstream of the north bridge approach in 1982 (Schuyler pers. comm.). The population, one of only six known in Montana, consisted of approximately 50 to 100 plants in water between 1 and 2 meters deep, and is the only known population on the Swan River.

In July 1993, another survey was conducted for water marigold in the bridge vicinity by a graduate student of Dr. Schuyler's. One patch of the plant was located about 120 to 150 feet downstream of the north end of the bridge structure. The majority of the population (estimated at about 80 percent) was located upstream of the existing bridge, at distances ranging from approximately 120 feet to nearly 3000 feet.

The western witchgrass population, surveyed in 1985, is located several hundred feet upstream of the north bridge approach in a small moist meadow. This is one of eight known locations for this species in Montana, but should not be affected by bridge replacement activities downstream of the existing bridge.

Several wildlife species of concern are known or suspected to occur in the general project vicinity (i.e., latilong); however, many of these occur as seasonal migrants or transients and/or are associated with habitats that would not be affected by the proposed project. Examples of such species include grizzly bear, gray wolf,

wolverine, fisher, lynx, northern bog lemming, peregrine falcon, ferruginous hawk, northern goshawk, and great gray owl. No species of concern were observed in the project area during surveys.

Lake-associated species of concern, such as common loon and American white pelican, may occur as seasonal migrants on the Swan River. Although associated with riverine habitat, harlequin ducks are not anticipated to nest in the project area, as they primarily breed along remote mountain streams away from concentrated human activities. Similarly, the tailed frog and Coeur D'Alene salamander, which are primarily associated with fast rushing mountain streams and spray zones, are not expected near the bridge.

Species of concern known from the region (e.g., latilong) that are primarily associated with habitat types which occur in the immediate project area include bald eagle, wood frog, and spotted frog.

The spotted frog, fairly common in western Montana, likely occurs along the marshy edges the wetland at the north end of the bridge. The MNHP has assigned the spotted frog a state rank of S4, which means the species is apparently secure in Montana, although it may be quite rare in parts of its range, especially at the periphery.

In the Northwest, the wood frog occupies open grassy areas bordered by thickets of willow and aspen, with spruce and other forest trees located nearby (Stebbins 1966). Little is known of the wood frog in Montana. Although assigned a range-wide status of G5, which means the species is demonstrably secure at the range-wide level, its Montana status is SU, indicating the frog may be in peril, but its status is uncertain due to lack of information. As the spotted frog, this species may occur in the wetland areas at the north end of the bridge.

Several bald eagle nest territories occur in the general Flathead Lake vicinity; however, no bald eagle nesting occurs within several miles of the project. This species is further discussed under Threatened and Endangered Species.

Impacts. Approach road widening and realignment under Alternatives C or D would result in the maximum loss of approximately 0.25 acres of coniferous riparian forest adjacent to the south end of the bridge. An additional 5-foot wide strip of riparian shrub vegetation would be lost along the west side of the north approach road. A total of about 0.14 acres of wetlands would be filled along the east and west sides of the north approach road. No existing vegetation would be affected under Alternatives A or B.

Due to the small amount of habitat that would be affected, and the existing proximity of that habitat to sources of human disturbance, impacts to general vegetation and wildlife habitat in the project area resulting from Alternatives C or D are judged to be less than significant. Similarly, disturbance to wildlife communities in the project area that construction activities under any of the build alternatives would cause is also considered to be less than significant, as the disturbance would be temporary and alternative similar habitat in the general area is abundant.

Tolerance of nesting ospreys to human activities depends on the timing and frequency of the activities and on the degree of habituation that individual pairs develop to them; ospreys nesting in an area frequented by humans may be more tolerant of human activities than those unaccustomed to humans (Rodrick and Milner 1991). Ospreys nesting on the power pole 300 feet north of the bridge are currently exposed to considerable road and pedestrian traffic associated with fishing, floating, hiking, and "normal" daily travel patterns. These birds should not be significantly disturbed by construction activities on the existing bridge or on either of the new bridges under consideration.

Grading, fill placement, and other heavy construction work on the north end of the north approach road, which ranges between 50 and 300 feet from the nest, is more likely to periodically disturb and flush birds from the nest than activities on the bridge itself. Causing adults to leave the nest frequently or for extended periods could be fatal to embryos and nestlings, particularly if this occurred before nestings were capable of independent thermoregulation. Construction-related risks to osprey nestlings could be substantially reduced or eliminated by enacting measures described below under Mitigation.

The osprey nests located 400-500 feet south and over 1000 feet west of the bridge are sufficiently screened and far enough from proposed construction activities to be significantly disturbed by them. No tree clearing would occur near either of these structures.

At estimated distances of 120 to 150 feet downstream and 120 to 3000 feet upstream of the existing bridge, no direct impacts to water marigold are anticipated from construction under any of the alternatives. The downstream plants may be exposed to temporary short-term increases in turbidity during construction; however, water marigold is capable of withstanding moderate increases in turbidity, particularly if these increases are not prolonged (Schuyler pers. comm.). Habitat in the area would likely clean itself out following construction (Schuyler pers. comm.). For these reasons, no significant impacts to water marigold are anticipated under any of the alternatives. The population of western witchgrass is located several hundred feet upstream of the bridge and would not be affected by construction activities.

Habitat for the spotted frog and wood frog, potential inhabitants of wetland areas north of the bridge, would be reduced by less than 0.2 acres under either of the new bridge alternatives. This impact is not considered significant due to the relative abundance of similar habitat in the project area and the relative security of the species. Wetland mitigation for this project, when identified and constructed, may replace lost habitat for these species in the project area.

No bald eagle nests occur in the area; no impacts to eagle nesting are anticipated from any of the alternatives. Eagles are further discussed under Threatened and Endangered Species.

As discussed above, other species of special concern, such as common loon, harlequin duck, wolverine, lynx, fisher, grizzly bear, and gray wolf may occur incidentally in the general project area, but are not expected to reside in the construction corridor. No significant impacts to these migrating and/or transitory

above-mentioned species (MDFWP 1988, 1989. 1990, 1991). Rainbow trout and mountain whitefish were by far the most abundantly collected species in the canal. Due to water depth, the reach of the Swan River through the project area cannot be electroshocked effectively. Consequently, no collection data specific to this reach is available.

No northern pike spawning has been documented in the immediate project vicinity; however, pike have been observed during the spawning period, and spawning, as well as rearing and maturing, is likely in the area (Rumsey pers. comm.). Little is known of the largemouth bass population in the area. A few are caught near the bridge by fisherman each year, but little data exists for this species.

No trout or mountain whitefish spawning occurs in the bridge vicinity, although rainbow trout redds have been documented between the bridge and Swan Lake (Rumsey pers. comm.). Habitat in the project area is primarily used by trout for migration and possible rearing (Rumsey pers. comm.). Trout rearing may be limited in the area due to the presence of northern pike and northern squawfish, both of which prey heavily on juvenile salmonids (Brown 1971).

The fish ladder at Bigfork Dam was sealed in 1990 to prevent upstream migration of lake trout and lake whitefish to Swan Lake, preventing fish recruitment to the project area from below. There is some recruitment to the project reach from above the bridge; primarily from rainbow trout, westslope cutthroat trout, and mountain whitefish (Rumsey pers. comm.).

Rare & Sensitive Species. Two species of concern, westslope cutthroat trout and bull trout, occur in the project vicinity. A petition to list bull trout as threatened or endangered was approved for further evaluation by the USFWS on May 17, 1993. As discussed above, habitat in the bridge area is primarily used for migration and possible rearing by trout; however, no spawning has been documented.

Both of these species were captured downstream of the bridge during the fall Bigfork Canal fish collection efforts conducted between 1988 and 1991 (MDFWP 1988, 1989, 1990, 1991). A few westslope cutthroat were captured during each of the four years (36/218 fish in 1988, 24/505 in 1989, 9/336 in 1990, and 10/193 in 1991. Only one bull trout was collected during the four year period (1989;1/505).

Impacts. Alternative A, the "no build" alternative, will result in no impacts to the river in the project area over existing conditions. Over the long term, however, leaving the bridge as is without replacement or rehabilitation would foster the continued deterioration of the bridge, which could conceivably result in an eventual collapse. Collapse of the bridge would likely result in significant impacts to water quality. The occurrence of such an event is speculation, however, and is not discussed further.

Alternative C, replacement of the existing 276-foot bridge with a 163-foot bridge, would cause the most impacts to the river among the 4 alternatives, primarily due to the amount of fill required at the abutments (about 4000 cy) to shorten the bridge span. Consequently, Alternative C will be the focus of this discussion, and

above-mentioned species (MDFWP 1988, 1989, 1990, 1991). Rainbow trout and mountain whitefish were by far the most abundantly collected species in the canal. Due to water depth, the reach of the Swan River through the project area cannot be electroshocked effectively. Consequently, no collection data specific to this reach is available.

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Impacts. Alternative A, the "no build" alternative, will result in no impacts to the river in the project area over existing conditions. Over the long term, however, leaving the bridge as is without replacement or rehabilitation would foster the continued deterioration of the bridge, which could conceivably result in an eventual collapse. Collapse of the bridge would likely result in significant impacts to water quality. The occurrence of such an event is speculation, however, and is not discussed further.

Alternative C, replacement of the existing 276-foot bridge with a 163-foot bridge, would cause the most impacts to the river among the 4 alternatives, primarily due to the amount of fill required at the abutments (about 4000 cy) to shorten the bridge span. Consequently, Alternative C will be the focus of this discussion, and

the others will he compared to it.

The primary long term impacts of bridge replacement would consist of alteration of local hydrology and fish habitat loss. Short term impacts, such as increased turbidity, would result from actual construction activities.

The hydraulics at the bridge are primarily controlled by the Bigfork Dam, located about 1 mile downstream. Considering elevational differences between the top of the dam and the water surface at the bridge, it is determined that the dam creates a minimum water depth of about 10 feet at the bridge. With the shortened bridge span, backwater elevation at the bridge would increase by 0.4 feet during the 100 year flood event; increase in backwater elevation would be much less at the average annual flow. From a fisheries standpoint, the increases in backwater would be insignificant; neither would have any significant detrimental or beneficial effects on fisheries habitat in the project area.

Based on 66 years of United States Geologic Survey records, the average flow at the bridge is 1166 cubic feet per second (cfs), and the average velocity is 0.6 feet per second (fps). The velocity of the river at the bridge during the 100 year flood (9620 cfs) is 3.4 fps.

Shortening the bridge span to 163 feet would increase the average velocity at the bridge from 0.6 fps to 0.9 fps. From a hydrological standpoint, this increase would be negligible, and would not present any velocity barriers to fish passage. At the 100 year flood event, the shortened span would increase the velocity at the bridge from 3.4 fps to 5 fps. Again, the increase would be nominal for such a flood event, and would not significantly affect fish movement beneath the bridge.

Placement of an estimated 4000 cy of fill material at the bridge abutments to shorten the span would result in corresponding fish habitat loss at the site. Habitat at the bridge and in the vicinity is suspected to be used for spawning, rearing, and maturing by northern pike, and for rearing and migration by trout and mountain whitefish. It is estimated that between 0.2 and 0.3 acres of habitat would be lost under the new bridge abutments. Additional small amounts of habitat would be lost to the construction of two bridge piers.

Habitat similar to that which would be lost to construction is abundant in the immediate area; consequently, it is inappropriate to consider the affected habitat as especially unique, limiting, or critical to local fish populations. Fish passage beneath the bridge, however, is very important to the local population. Because the amount of habitat that would be lost is small and localized; similar habitat is abundant in the immediate project vicinity; and no significant hydrological impacts or effects on fish movement at the bridge are anticipated, it is determined that construction of the 163-foot bridge would not significantly affect fish habitat or activities in the project vicinity, including those of westslope cutthroat and bull trout.

Actual placement of the fill and piers would result in short-term increases in turbidity at and downstream of the project site. Deposition of excessive fine sediment on stream bottoms can reduce macroinvertebrate abundance and diversity, reduce permeability of spawning gravels, and block interchange of

subsurface and surface waters (Nelson et al. 1991). Turbidity increases would be temporary and relatively short term, and best management practices for sediment/erosion control during construction would be employed in compliance with applicable water quality permits. Consequently, no significant long-term turbidity-related impacts are anticipated.

Northern pike typically spawn in shallow flooded marshes or backwaters (Brown 1971), an abundant habitat type in the project area. Fertilized eggs are adhesive and stick to vegetation and other substrates; no nest is constructed. No protection is afforded the young by the parents, which return to deeper water soon after spawning. Impacts to spawning adults during construction would be minimal.

Significant impacts to spawning northern pike are not anticipated due to the small amount of habitat that would be affected, the local abundance of similar habitat, and the spawning habits of the species. Impacts would be further minimized if instream work occurred during the late summer months. For northern pike in the project area, prespawning movement and spawning occurs from March to June; hatching and out-migration occurs in June and July (Rumsey pers. comm.).

Impacts of Alternative B, rehabilitating the existing bridge, and Alternative D, constructing a new 290-foot bridge, on fisheries resources would be less than those that would occur under Alternative C. As no additional encroachment into the river at the bridge abutments would be required under Alternatives B or D, it follows that approximately 0.2 to 0.3 acres less fish habitat would be lost under these alternatives than would be lost under Alternative C. Very small amounts of habitat would be lost to the 290 foot bridge where 2 to 3 piers would be required; it is currently unknown whether rehabilitation of the existing bridge would require rehabilitation or replacement of pier footings. Amounts of habitat that would be lost to pier construction are unknown at this time; however, it is presumed that habitat lost to piers would amount to less than 0.1 acres.

Based on the above analysis of Alternative C, it is determined that implementation of Alternatives B and D would not significantly affect fisheries or hydrological resources in the project area.

Mitigation/Coordination Measures. Conditions specified in the Stream Protection Act permit and other permits required for this project will assist in minimizing project-related impacts from all alternatives. Best Management Practices for sediment/erosion control would be employed during construction to minimize sediment increases in the Swan River during construction.

Opportunities to mitigate in the project area for the estimated 0.2- to 0.3-acre loss of fish habitat under Alternative C are very limited; little can be done to improve fish habitat in the area (Rumsey pers. comm.). MDFWP has suggested mitigation in the form of improving a floater take-out area at Bear Creek, approximately 4 miles upstream of the bridge on the Swan River (MDFWP 1993).

Threatened and Endangered Species

Threatened and endangered species include those species listed or proposed for listing by the USFWS as threatened or endangered. Under Section 7 of the

Endangered Species Act, as amended, activities conducted, sponsored, or funded by federal agencies must be reviewed for their effects on species federally listed or proposed for listing as threatened or endangered.

No plant species in Montana are federally listed as threatened or endangered. One aquatic plant species, water howellia (Howellia aquatilis), is proposed for listing; however, the proposed project does not fall within the expected range of this species.
Threatened or endangered wildlife species which may occur in the project area are: the bald eagle (endangered), peregrine falcon (endangered), gray wolf (endangered), and grizzly bear (threatened). The project area is not included in any grizzly or wolf recovery zones, and has not been classified into any of the three "grizzly bear management situations". Additionally, due to the relatively high levels of human activity and poor quality of grizzly and wolf habitat in the project area, these species are not expected in the immediate project vicinity, and are not considered for further analysis in this report.

As previously mentioned, a petition to list bull trout as threatened or endangered was approved for further evaluation by the USFWS on May 17, 1993. Given the nature (e.g., no spawning; possible rearing) and low level of bull trout use in the project area, and the scope of the alternatives under consideration, no adverse impacts to this species are anticipated (see previous discussion under Aquatic Resources).

Bald Eagle

Analysis. Four occupied bald eagle nest sites occur within 6 miles of the subject bridge (MDFWP 1992b, Flath pers. comm.). Nests occur at the north shore of Flathead Lake, Fennon Slough (Flathead River), Echo Lake, and near Loon Lake. The closest of these, the nest near Loon Lake, is over 2.5 miles from the proposed project. It is likely that eagles from most of these nests forage at times in the project area; adult eagles have frequently been observed perching near the Bigfork Dam on the hillside north of the river (Flath pers. comm.).

MDFWP surveyed the immediate project area for bald eagle nests by plane in April 1993. No new nests were located. Eagles periodically observed near the dam are most likely foraging adults from one of the nests listed above (Flath pers. comm.). No eagles were observed in the project area during March and April reconnaissance surveys.

None of the eagle nests in the project area are close enough to be affected by construction-related disturbance. Although minor clearing (approximately 0.25 acres) of immature coniferous forest would occur adjacent to the south end of the bridge under Alternatives C or D, no potential nest habitat would be affected by the project. Consequently, no impacts to nesting eagles are anticipated from the proposed project.

Eagle use in the project vicinity occurs primarily along the Swan River where potential perch trees are abundant. In addition to pairs nesting in the area, bald eagles may occur as spring and fall migrants, non-breeding summer residents, and occasional winter residents (Flath pers. comm.).

The above-mentioned clearing of 0.25 acres of immature coniferous forest would not represent a significant loss of potential perch habitat, as the affected habitat is of marginal quality and higher quality perch habitat is abundant in the immediate area. As discussed under Aquatic Resources, no significant impacts to fisheries are anticipated from any of the "build" alternatives.

Construction activities may temporarily disturb or displace eagles foraging in the immediate bridge vicinity. However, because: (1) no primary foraging habitat would be affected; (2) the areas and duration of disturbance would be relatively confined, and (3) undisturbed habitat for displaced birds is abundant in the surrounding area, these impacts are considered to be less than significant.

Mitigation/Coordination Measures. The following measures are required to ensure that impacts to bald eagles are minimized:

- Required: The contractor shall contact an MDT biologist to assess the overall status of nesting bald eagles in the project area prior to the onset of construction.

- Required: The location of construction-related activities, such as staging, batch plant, and borrow/gravel source activities, must receive prior review from an MDT biologist.

Determination of Effects. Based on the above information and mitigation/coordination measures, it is determined that implementation of the proposed action is not likely to adversely affect the bald eagle.

Peregrine Falcon

Analysis. Peregrine falcons may occur in the project area as spring and fall migrants (Flath pers. comm.). The proposed alignment would not cross any primary potential nesting habitat such as rock outcrops or cliff ledges, and no such habitat occurs within several miles of the project. For these reasons, the proposed project is not expected to affect nesting peregrines.

Potential habitat for migrating falcons in the immediate project area primarily occurs along the Swan River and associated sloughs and wetlands. Construction during spring and fall may temporarily disturb migrating peregrines foraging over the river; however, it is anticipated that few, if any, peregrines would be displaced during construction. Additionally, similar habitat is abundant in the immediate vicinity and would provide ample habitat for displaced birds. Therefore, impacts to migrating peregrines resulting from construction of the project are considered to be less than significant.

Mitigation and Coordination Measures. As peregrines are only expected to sporadically occur in the project area, and no significant impacts to peregrines are anticipated from the project, no mitigation/coordination measures are required for this species.

Determination of Effects. Based on the above information, it is determined that implementation of the proposed action will not affect the

peregrine falcon.

Conclusions: Threatened and Endangered Species. It is the determination of this report that the proposed action is not likely to adversely affect the bald eagle, and will not affect the peregrine falcon, grizzly bear, gray wolf, or water howellia. The specified mitigation/coordination measures have influenced the conclusions drawn from this assessment, and are subject to subsequent review by the Endangered Species Office of the USFWS to determine compliance with the Endangered Species Act. Consequently, any substantive deviation from the proposed measures contained in this assessment will require approval from that office.

Wetlands

A wetlands survey was conducted and a Wetlands Finding prepared for the proposed project in May of 1992 (MDT 1992). A supplemental delineation was conducted in fall of 1993. Two wetlands occur in the immediate project area, and are described below. Wetland locations are shown on the attached map.

A MDT/MDFWP wetland site evaluation form for Site 2 is included in this report; the evaluation form for Site 1 was presented in the original Wetlands Finding prepared for the subject project and is not included here. However, summaries of wetland functions and values for each of the two sites, as determined using the MDT/MDFWP wetland site evaluation forms, are presented in Table 1. On a scale from 1 to 24, Sites 1 and 2 each rated a "16", or moderate to high value, in terms of functions and values (Table 1) when rated on the wetland site evaluation form.

Site 1 occurs north of the bridge along the east side of the approach road. The wetland is an approximate 0.7-acre emergent/scrub-shrub marsh adjacent to the river which is dominated by cattail, willow, and red-osier dogwood, and is bordered by patches of Douglas-fir/western larch/aspen forest. Habitat interspersion at Site 1 is excellent, providing habitat for a variety of wildlife species.

Site 2, an approximate 2.3-acre emergent shallow marsh, occurs north of the bridge on the west side of the approach road. The wetland is dominated by bulrush and sedge, and was flooded to depths of six inches to 1 foot during the fall survey. The site provides some fish habitat, and is likely used as a foraging area for wildlife such as osprey and great blue heron.

Approximately 0.07 acres of each wetland (a total of 0.14 acres) would be filled as part of the approach road widening proposed under Alternatives C and D. Wetland acres in the immediate project vicinity would be reduced from approximately 3 to 2.86 acres; a reduction of about 5 percent. This would not represent a significant loss to either wetland in terms of function or value.

Originally, it was estimated that 0.26 wetland acres would be impacted; however, through design modifications, including steepening slopes and installing guardrail on the approach road, projected wetland impacts have been minimized to the extent practicable under Alternatives C and D. No wetland loss would be

anticipated under Alternatives A or B.

As no onsite mitigation ooportunities have been identified, the 0.14-acre balance will be added to the MDT Wetland Ledger and compensated for when suitable mitigation site(s) are identified and approved by the Montana Interagency Wetland Group.

MDT will continue to pursue additional potential mitigation sites in the project vicinity in compliance with the Interagency Memorandum of Understanding: Management and Mitigation of Highway Construction Impacts to Wetlands in the State of Montana.

REFERENCES

Bergeron, D., C. Jones, D.L. Genter, and D. Sullivan. 1992. P.D. Skaar's Montana bird distribution, fourth edition. Special publication no. 2. Montana Natural Heritage Program. Helena, Montana. 116pp.

Brown, C.J.D. 1971. Fishes of Montana. Big Sky Books, Montana State University. Bozeman, Montana.

Flath, Dennis. Nongame Biologist, Montana Department of Fish, Wildlife, & Parks. Bozeman, Montana. January and June 1993 telephone conversations.

Montana Department of Fish, Wildlife & Parks. 1988. Bigfork Canal fish collection data. Kalispell, Montana. Unpublished data.

Montana Department of Fish, Wildlife & Parks. 1989. Bigfork Canal fish collection data. Kalispell, Montana. Unpublished data.

Montana Department of Fish, Wildlife & Parks. 1990. Bigfork Canal fish collection data. Kalispell, Montana. Unpublished data.

Montana Department of Fish, Wildlife & Parks. 1991. Bigfork Canal fish collection data. Kalispell, Montana. Unpublished data.

Montana Department of Fish, Wildlife & Parks. 1992a. Letter to Montana Department of Transportation regarding fisheries and wildlife concerns relative to the proposed Swan River bridge project. Kalispell, Montana.

Montana Department of Fish, Wildlife & Parks. 1993. Letter to Montana Department of Transportation regarding the Stream Protection Act relative to the proposed Swan River bridge project. Helena, Montana.

Montana Department of Fish, Wildlife, & Parks. 1992b. Locations of bald eagle nest territories of record - August 1, 1992. Bozeman, Montana. Unpublished Data.

Montana Department of Fish, Wildlife, & Parks. 1988. The Montana rivers information system. Helena, Montana.

Montana Department of Transportation. 1992. Wetland report - BR 9015 (11) Swan River bridge - west of Ferndale. Helena, Montana.

Montana Natural Heritage Program. 1992. Printout of sensitive species occurrences in the vicinity of the Swan River Bridge project. Helena, Montana.

Payne, G.F. 1973. Vegetative rangeland types in Montana. Montana Agricultural Experiment Station, Montana State University. Bozeman, Montana.

Reed, P.B. 1988. National list of plant species that occur in wetlands: Northwest (Region 9). U.S. Fish and Wildlife Service. Washington, D.C. 89p.

Roderick, E., and R. Milner (eds.). 1991. Management recommendations for Washington's priority habitats and species. Washington Department of Wiidlife. Olympia, Washington.

Rumsey, S. Fish Biologist. Montana Department of Fish, Wildlife, & Parks, Kalispell, Montana. January and February 1993 telephone conversations.

Schuyler, A. Yellow Bay Biological Station, University of Montana. Bigfork, Montana. February 1993 telephone conversation.

Shelly, K. Wildlife Biologist. United States Fish and Wildlife Service. Creston, Montana. December 1992 telephone conversation.

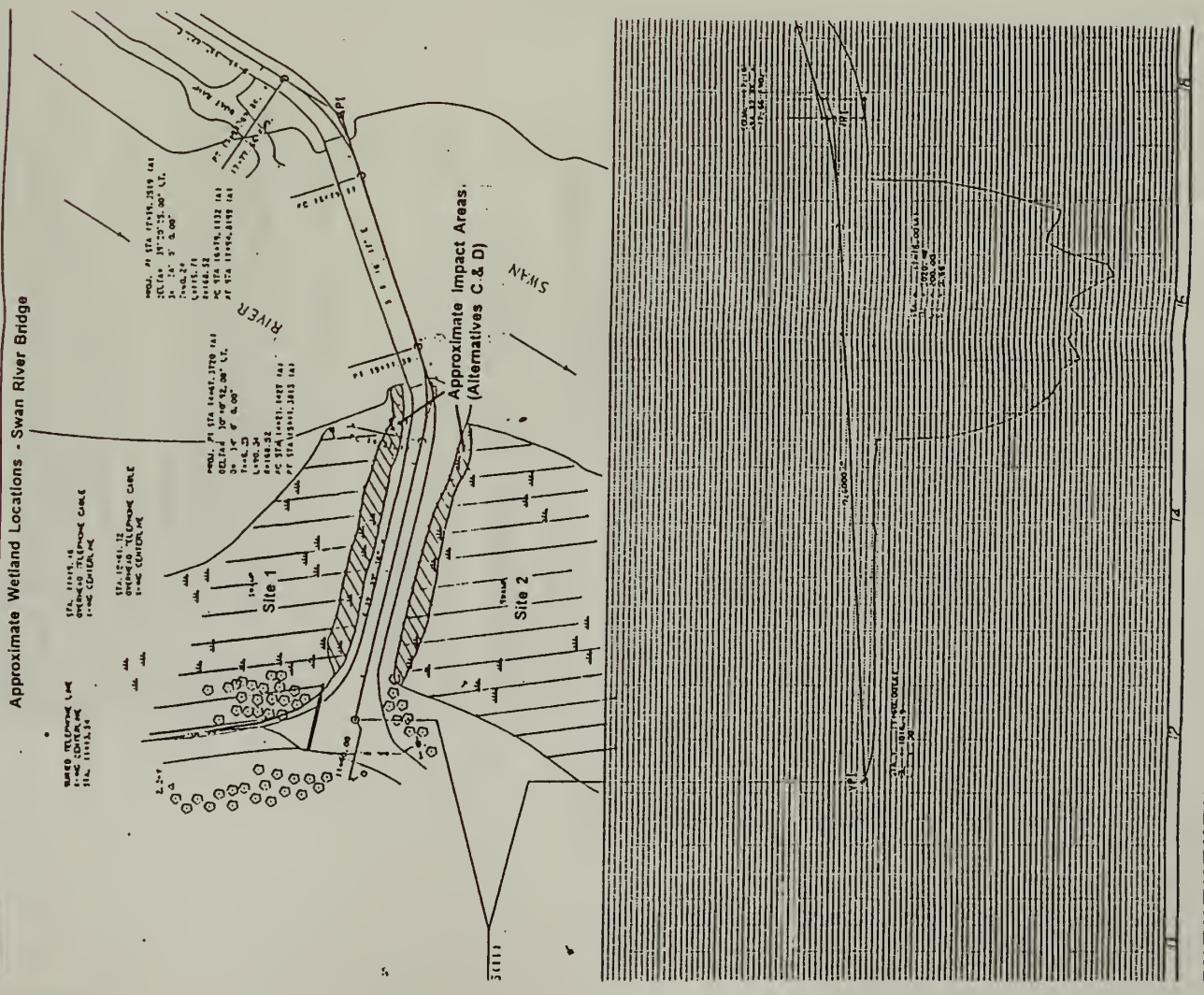
Stebbins, R.C. 1966. A field guide to western reptiles and amphibians. Houghton Mifflin Company. Boston, Massachusetts.

Thompson, L.S. 1982. Distribution of Montana amphibians, reptiles, and mammals. The Montana Audubon Council. Helena, Montana.

Table 1 - Swan River Bridge
Summary of Wetland Functional Values and Overall Rankings
from MDT/MDFWP Wetland Site Evaluation Forms*

Evaluation Criteria and Maximum Value	Site 1	Site 2
Sediment Control Rating (3)	2	3
Nutrient Retention Rating (3)	3	2
Relative Flood Storage Rating (3)	3	3
Relative Food Chain Support (3)	3	3
Wildlife Habitat Values		
Highest (3)	2	2
Lowest (3)	2	0
Fisheries Habitat Values		
Highest (3)	1	2
Lowest (3)	0	1
Totals (24)	16/24	16/24

* See MDT/MDFWP Wetland Site Evaluation Forms for explanation of criteria and values.



MDT/MDFWP
WETLAND SITE EVALUATION

Project Name Swan River Bridge -West of Ferndale Project No. BR 9015(11)
County Flathead Drainage Swan River
Township 27N, Range 19W, Section 32

Site Location Hwy off 209 Station n/a Milepost n/a

Date of Evaluation 10/20/93 Evaluator Berglund

Comments Site occurs immediately west of the north approach road at the Swan River bridge; is referred to as "Site #2".

1. Classification (from Novitski, 1979)

Hydrologic/Vegetative Type(s) (see reverse side)

1. Type I-D Area 100% Size 2.3 acres
   Dominant species (a) Scirpus Sp.
   (b) Carex Sp.
   (c) Potentilla anserina

2. Type Area Size
   Dominant Species (a)
   (b)
   (c)

3. Type Area Size
   Dominant Species (a)
   (b)
   (c)

2. Adjacent Supporting Habitats (Descriptive Summary to include type, vegetation, area, location, condition, wildlife/fisheries values.)
Adjacent to dammed reach of Swan River, which provides habitat for several wildlife and warm water fish species. Is also wetland (scrub/shrub-emergent) on east side of north approach road which is high quality wildlife habitat particularly for deer, osprey, and several songbird species.

Adjacent UPLAND Habitats (vegetation, area, location, condition, land use, erosion potential, wildlife values)
Site bordered by riparian strip of Douglas fir/alder/red osier dogwood forest. Surrounding upland habitat is chiefly comprised of Douglas fir/western larch forest.

Wetland Hydrologic Category and Vegetative Type (Novitski, 1979)

I. Hydrologic Cat.: Sites with Permanent Shallow Water (6.6 ft.)

Vegetative type

A. Floating
B. Rooted Submerged
C. Rooted Floating-leaved
D. Rooted Emergent

II. Hydrologic Cats.: Sites with Seasonal or Permanent High Water Tables, but WITHOUT Permanent Standing Water.

Vegetative type

A. Herbaceous
B. Shrub
C. Forested
D. Unvegetated

III. Hydrologic Cat.: Riparian Sites Adjacent to Streams or Rivers with Seasonally Saturated Soil Conditions.

Vegetative type

A. Herbaceous
B. Shrub
C. Forested
D. Unvegetated

Sites may have more than one hydrologic category and vegetative type present. The estimated relative percent of each vegetative type should be recorded under 'Area'. 'Size' entry is for estimated area in hectares/acres. A site with more than one hydrologic and vegetative type could be characterized as a I A/C, 2080; II B/C, 40/60, indicating that a permanently flooded, shallow water wetland is present, consisting of floating and rooted emergent vegetative types in a 20:80 ratio AND a community with seasonal or permanent high water table consisting of shrub and forested vegetative types in a 40:60 ratio. Total size can be estimated to the nearest hectare/acre based on field observations, measured on suitable aerial photography, or calculated from road plans, as appropriate.

Conversions
# of square feet X .000022957-ACRES, I Hectare-2.47 Acres

Acres X .40485 = HECTARES

3. Relative Commonness of Wetland Type in Area 2
   (1) abundant (2) common (3) rare

4. Recreational Use Potential 1
   (1) low (2) moderate (3) high

5. Degree of Habitat Interspersion 1
   (1) low (2) moderate (3) high

6. Vegetative Cover Characteristics of Flooded Wetlands.
   (not applicable to non-flooded wetlands)

   a. Cover occupies more than 95% of wetland 0.5

   b. Cover occupies 76-95% of wetland in a peripheral band 1.5

   c. Cover occupies 76-95% of wetland with scattered open water areas (2.5)

   d. Cover occupies 26-75% of wetland occurring in dense patches or diffuse open stands 1.0

   e. Cover occupies 26-75% of wetland in a peripheral band 2.0

   f. Cover occupies 5-25% of wetland occurring in a peripheral band or diffuse open stands 1.0

   g. Cover occupies less than 5% of the wetland 0.5

7. Inundation Frequency

   a. Temporary surface water or saturated soil 1

   b. Seasonally or intermittently flooded 2

   c. Semi-permanent or permanently flooded (3)

8. Water Flow Rating Criteria

   a. Most of the water flows through the wetland in distinct channels or watercourses or has little flow of surface water during the year 1

   b. Channels or watercourses present, but a significant portion of water is sheet flow through the wetland 2

   c. Water flows across wetland uniformly and is not contained in channels or watercourses . . . . (3)

3. Relative Commonness. Self-explanatory - a subjective assessment.

4. Recreational Potential. Examples of wetland areas with high recreational potential are Freezeout Lake near Fairfield, which is a state managed waterfowl production area. At the other extreme are roadside borrow pits with little to no potential.

5. Habitat Interspersion (diversity) ranked from low to high (1-3) according to the following criteria.

   A. High diversity (3) sites have a t least three wetland vegetative types present with abundant edge of several different kinds. Life form zones of vegetation are broken into segments of variable size and shape. Habitat elements are small and scattered.

   B. Moderate diversity (2) sites have edges moderate in length and diversity, with some irregularity and scattering of vegetative type stands, but most stands are unbroken.

   C. Low diversity (1) sites have minimum length and types of edges. Vegetative types occur in concentric rings, with largely unbroken stands. May be composed primarily of a single, vegetative stand dominated by one species, such as cattail.

6. Vegetative Cover Characteristics. For permanently or seasonally flooded sites, an estimation of the ratio of vegetative cover to open water and distribution of vegetative stands is used as an indicator of habitat quality. Seven classes of cover/water ratio are employed, ranked numerically from 0.5 to 3.0 on the basis of assigned functional value.

7. Inundation frequency. This function is evaluated on the basis of 1) proximity of the site to potential floodway or floodwaters; 2) physical or biological evidence of flooding, such as saturated soil, debris, water marks, vegetation or lack thereof; 3) deposition of sediment; 4) or any other indication that flooding occurs. Inundation frequency affects flood control potential and habitat values for specific classes of fish and wildlife.

8. Water Flow Rating Criteria. Water flow rating is assigned a value of 1-3, based on the pattern and frequency of flow through the wetland. Continual or seasonal sheet flow is rated 3, while intermittent flow in a contained channel is rated I. This parameter affects nutrient retention, sediment retention, and [illegible] potential.

Functional Value Parameters
The following six parameters are the Summary of Functional Values and afford a numerical Overall Site Ranking. Keys for specific paragraphs are found on the reverse of this form.

9. Relative Flood Storage Potential
   a. Section 8, line a; Section 7, line a 1
   b. Section 8, line b; Section 7, line b 2
   c. Section 8, line c; Section 7, line c . . . . (3)

10. Sediment Control/Load Rating Criteria
   a. Wetland does not receive detectable amounts of sediment - the watercourse is relatively sediment-free and accumulations are not evident 1

   b. Wetland receives some sediment load but not enough to impact the plants or aquatic organisms using the site. The watercourse has sediment accumulations, but the water is not normally turbid . . . . . (2)

   c. Wetland receives heavy sediment loads that has impacted the plant/animal growth/use of the site. The watercourse has large accumulations of sediment and the water is usually turbid 3

11. Nutrient Retention Capabilities
   (circle one ranking)
   a. Non-contiguous wetland with little accumulation of organic matter 1

   b. Non-contiguous wetland with organic material accumulation 2

   c. Contiguous wetland with little accumulation of organic matter 2.5

   d. Contiguous wetland with organic material accumulation . . . . . (3)

12. Relative Food Chain Support Potential
   a. Low (Vegetative cover less than 5%, non-contiguous; no accumulation of organic matter 1

   b. Moderate (Vegetative cover 6-25%; contiguous or non-contiguous to other supporting habitats; some accumulation of organic matter 2

   c. High (Vegetative cover 26-100%, contiguous to other supporting habitats, some accumulation of organic matter . . . . . (3)

9. Relative Flood Storage Potential. Ranking of 1 to 3 based on a subjective evaluation of Inundation Frequency (Para 7) and Water Flow Rating (Para 8). A flood storage rating higher than 1 should initiate additional evaluation and coordination with other concern agencies. At a minimum, it should be brought to the attention of MDT's Hydraulics Section. It is probable that only rarely will a wetland with significant flood control capacity be affected by a highway construction project.

10. Sediment Control/Load Rating. This criteria is rated from 1 (low) to 3 (high), based ont he presence or evidence of sediment deposition in the site, sediment sources contiguous to or which drain into the site, and the physical potential of the site to retain sediment and prevent downstream impacts. Factors affecting the retention potential are size, volume, flow characteristics (sheet flow versus channelized flow), and vegetative type (rooted emergents with a high cover density provide maximum retention).

11. Nutrient Retention Capabilities. Non-contiguous implies an isolated basin with no interactions with adjacent wetlands.

12. Food Chain Support Potential. A variety of factors is considered for this rating to include the probability of export to other habitats, especially those downstream. The relative rate of total biomass production and specific forage values as compared to the surrounding habitats should be considered in ranking food chain support.

13 Wildlife Habitat Values (Rating from 0 to 3)

(Based on cover, diversity, supporting habitats, and productivity)

Evaluation Group or Species

a.	Waterfowl	2
b.	Upland Game Birds	0
c.	Songbirds	1
d.	Raptors (non T&E)	2
e.	Furbearers	2
f.	Non-furbearing small mammals	1
g.	Large Ungulates (elk, moose, deer)	1
h.	Large Carnivores (bear, cat)	1
i.	Threatened or Endangered Species	2

Evaluate utilization by waterfowl/wildlife of wetland site for nesting, rearing young, feeding or protective cover based upon the following criteria (high, medium, low).

Use by wildlife group is significant in that loss or reduction by the wildlife use would have an adverse effect on the population of the species or wildlife in the general area (township) 3

Use by wildlife group is evident or probably and loss or reduction of the wildlife use may have an adverse effect on the local wildlife population (surrounding sections) 2

Use by wildlife group is incidental in that loss or reduction of wildlife use would have a negligible effect on the local population 1

Use by wildlife group is non-existent at any time during any year 0

Comments

14. Fisheries Habitat Values (Rated from 0 to 3)

(Based on utilization as spawning, nursery, feeding, or cover areas)

Evaluation Group

a.	Montana Fishes of Special Concern	1
b.	Trout Species	1
c.	Other Salmonids	1
d.	Non-Salmonid Game Fish	2
e.	Non-Game or Rough Fish	2

Evaluate utilization for each group for spawning, nursery, feeding, or cover areas based upon the following criteria:

Use by fish is significant in that loss or reduction of the fish use would have an adverse effect on the population of the fish in adjacent waters 3

Use by fish is evident or probably and loss or reduction of the fish use may have an adverse effect on the population of fish in the immediate vicinity but the magnitude of the reduction would be insignificant in relation to the total population of fish in adjacent waters 2

Use by fish is incidental in that loss or reduction of the fish use would have negligible effect on the population of fish in the immediate vicinity 1

Use by fish never present at any time in the year 0

15. Summary of Functional Values and Overall Site Ranking

Relative Flood Storage (Para 9)	3/3
Sediment control & Load (Para 10)	2/3
Nutrient Retention (Para 11)	3/3
Relative Food Chain Support (Para 12)	3/3
Wildlife Habitat Values (Para 13)	
Highest (Evaluation Group a,d,e,i)	2/3
Lowest (Evaluation Group b)	0/3
Fisheries Habitat Values (Para 14)	
Highest (Evaluation Group d,e)	2/3
Lowest (Evaluation Group a,b,c)	1/3

16/24

Montana Department of Transportation
Helena, Montana

Wetland Report

BR 9015(11)
Swan River Bridge - West of Ferndale

Prepared by:
The Environmental & Hazardous Waste Bureau

Date: May 8, 1992

Wetland Inventory and Assessment
BR 9015(11)
Swan River Bridge - West of Ferndale

I. Description of Wetland Resource

The wetland was caused by initial borrow to build the bridge approaches which are periodically flooded by seasonally high water. The river does contribute to some of the development but the wetland is maintained permanently wet by ground water and springs. The wetland is below the head water of the drainage and the site elevation during normal flow is above the river's normal flow.

II. Wetland Assessment

III. Wetland Finding

IV. Site Forms

V. Photos

VI. Plans and Site Location Map

VII. Total Wetland Impact Equals .26 Acres

VIII. Contractor Incentives

No on-site mitigation is practical.

LJI:Q:ENV:13.kmc-2

II. Wetland Assessment and Inventory

Wetland assessment and inventories are in-house working documents prepared for internal review and for review by the cooperating regulatory agencies. Wetland documents are submitted to the interagency wetland group for concurrence.

This document is subject to review at Final Plan-In-Hand for compatibility with plan changes, potential for avoidance, erosion control and on-site mitigation potentials.

Mitigation proposals are subject to right-of-way agreements, cost-effectiveness and compatibility with the engineering criteria for road and bridge construction.

Wetland assessment is in accordance with the Interagency Memorandum of Understanding: Management and Mitigation of Highway Construction Impacts to Wetlands in the State of Montana.

Delineation in accordance with The Corps of Engineers Wetlands Delineation Manual (1987), along with The National List of Plant Species that Occur in Wetlands: Northwest (Region 9), US Fish and Wildlife Services.

References: Forest Habitat Types of Montana, R.D. Pfister; Vascular Plants of Pacific Northwest, D.L. Hitchcock; Soil Conservation Service, USDA Soil Survey of Montana by Counties.

LJI:D:ENV:200.kmc

III. WETLANDS FINDING

1) This FINDING provides documentation that this proposed project will minimize the destruction, loss, or degradation of wetlands. This FINDING also documents the steps to preserve and enhance the natural and beneficial values of the wetlands affected by this proposed project. This proposed project's impacts to wetlands will be in compliance with Executive Order 11990.

2) It has been determined that there are no practicable alternatives to this proposed project due to the following:

   The "no-build" alternative has been found to be inadequate to meet the needs of the travelling public in this vicinity. This alternate does not correct the poor alignment, narrow width, unsafe conditions, and/or traffic congestion at this location. Any of these conditions have been determined to be sufficient to warrant correction by this proposed project.

3) This proposed project has been determined to include all practicable measures to minimize harm to wetlands. This determination has been made through the mitigation process described on the following page(s).

4) Based upon the above considerations, it is determined that there is no practicable alternative to the proposed new construction in wetlands and that the proposed project includes all practicable measures to minimize harm to wetlands which may result from such use.

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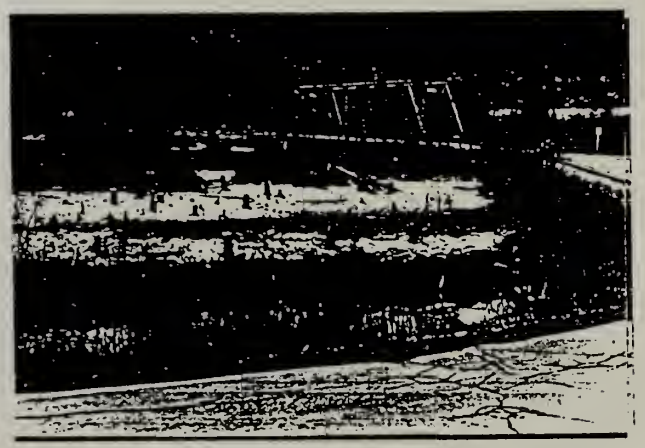
V. Swan River Bridge
Wetlands Type I



MDT/MDFWP
WETLAND SITE EVALUATION

Date May 20, 1992

Project No. BR 9015(11)

Project Name Swan River Bridge - West of Ferndale

County Flathead Drainage See Plans
R. , T. , Section

Site Location Station (on plan sheet) See Maps

Comments (route, milepost, etc.)

1. Classification (from Novitski, 1979)

Hydrologic Type(s) Type III A, B
Area

Vegetative Type(s) (1) Type III
Dominant Species (a) Water Cress
(b) Cattail
(c) Willows
(d) Dogwood
(a)
(b)
(c)
(3)
(a)
(b)
(c)

2. Adjacent Supporting Habitats (Descriptive Summary)
Wetlands (type, vegetation, area, location, condition, wildlife values)
The supporting habitat is forested consisting of douglas fir/spruce with an understory of dogwood, Idaho fescue and forbs. Wildlife values are high due to good cover and forage. This is a main traveled area and does have a nearby population center.

Uplands (vegetation type, area, location, condition, land use, erosion potential, wildlife values)
Upland is a forested condition and is very good with a low erosion potential wildlife values are good.

3. Relative Commonness of Wetland Type in Area 2
(1) abundant (2) common (3) rare

4. Degree of Habitat Interspersion
Low = 1 Moderate = 2 High = 3

5. Vegetative Cover Characteristics of Flooded Wetlands. (not applicable to non-flooded wetlands)

		Rating
a.	Cover occupies more than 95% of wetland	0.5
b.	Cover occupies 76-95% of wetland in a peripheral band	1.5
c.	Cover occupies 76-95% of wetland with scattered open water areas	2.5
d.	Cover occupies 26-75% of wetland occurring in dense patches or diffuse open stands	3.0
e.	Cover occupies 26-75% of wetland in a peripheral band	2.0
f.	Cover occupies 5-25% of wetland occurring in a peripheral band or diffuse open stands	1.0
g.	Cover occupies less than 5% of the wetland	0.5

6. Inundation Frequency

		Rating
a.	Temporary surface water or saturated soil	1
b.	Seasonally or intermittently flooded	2
c.	Semi-permanent or permanently flooded	3

7. Sediment Control/Load Rating Criteria

		Rating
a.	Wetland does not receive detectable amounts of sediment - the watercourse is relatively sediment-free and accumulations are not evident	1
b.	Wetland receives some sediment load but not enough to impact the plants or aquatic organisms using the site. The watercourse has sediment accumulations, but the water is not normally turbid	2
c.	Wetland receives heavy sediment loads that has impacted the plant/animal growth/use of the site. The watercourse has large accumulations of sediment and the water is usually turbid	3

8. Water Flow Rating Criteria

a. Most of the water flows through the wetland in distinct channels or watercourses or has little flow of surface water during the year 1

b. Channels of watercourses present, but a significant portion of water is sheet flow through the wetland 2

c. Water flows across wetland uniformly and is not contained in channels or watercourses 3

9. Nutrient Retention Capabilities (circle one ranking)

a. Non-contiguous wetland with little accumulation of organic matter 1

b. Non-contiguous wetland with organic material accumulation 2

c. Contiguous wetland with little accumulation of organic matter 2.5

d. Contiguous wetland with organic material accumulation 3

10. Relative Flood Storage Potential

a. Section 8, line a; Section 6, line a 1

b. Section 8, line b; Section 6, line b 2

c. Section 8, line c; Section 6, line c 3

11. Relative Food Chain Support Potential (Based on percent vegetative cover and estimated relative standing crop).

a. Low (vegetative cover less than 5%; non-contiguous; no accumulation of organic matter) 1

b. Moderate (vegetative cover 6-25%; contiguous or non-contiguous to other supporting habitats; some accumulation of organic material) 2

c. High (vegetative cover 26-100%; contiguous to other supporting habitats, some accumulation of organic material) 3

12. Wildlife Habitat Values (Overall) Rating (0-3)
(Based on cover, diversity, supporting habitats, and productivity)

Evaluation Group or Species

a. Waterfowl 2
b. Upland Game Birds 2
c. Songbirds 2
d. Raptors and Others 2
e. Furbearers 2
f. Non-furbearing small mammals 2
g. Large Ungulates (elk, moose, deer) 3
h. Large Carnivores (bear, cat) 2
i. Threatened or Endangered Species 3

Evaluate utilization by waterfowl/wildlife of wetland site for nesting, rearing young, feeding or protective cover based upon the following criteria (high, medium, low).

Use by wildlife group is significant in that loss or reduction by the wildlife use would have an adverse effect on the population of the species or wildlife in the general area (township) 3

Use by wildlife group is evident or probably and loss or reduction of the wildlife use may have an adverse effect on the local wildlife population (surrounding section[s]) 2

Use by wildlife group is low or incidental in that loss or reduction of the wildlife use would have a negligible effect on the local wildlife population . 1

Use by wildlife group is non-existent at any time during any year. NOTE: Use .3 to signify occasional use 0

13. Estimate utilization by fish for spawning, nursery, feeding, or cover.

a. Montana fishes of special concern 0
b. Trout "brookies" 0
c. Other Salmonids 0
d. Non-Salmonid Game Fish (pike, bass, walleyes) 0
e. Non-Game or Rough Fish 0

Use by fish is significant in that loss or reduction of the fish use would have an adverse effect on the population of the fish in adjacent waters 3

Use by fish is evident or probably and loss or reduction of the fish use may have an adverse effect on the population of fish in the immediate vicinity but the magnitude of the reduction would be insignificant in relation to the total population of fish in adjacent waters 2

Use by fish is low or incidental in that loss or reduction of the fish use would have negligible effect on the population of fish in the immediate vicinity 1

Use by fish never present at any time in the year 0

		1
14.	Recreational Use Potential	2
		3

15. Summary of Functional Values and Overall Site Ranking

Sediment control rating	2/3
Nutrient retention rating	2/3
Relative flood storage rating	2/3
Relative food chain support	3/3
Wildlife Habitat Values	
Highest (Evaluation Group ____)	3/3
Lowest (Evaluation Group ____)	2/3
Fisheries Habitat Values	
Highest (Evaluation Group ____)	0/3
Lowest (Evaluation Group ____)	0/3
	14/24

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Summary of Wetland Functional Rankings for Sites

Sites	Site Functional Ranking (1 thru 3)
Relative Occurrence	2
Habitat Interspersion	2
Cover: Water Ratio	3
Inundation Frequency	2
Sediment Control	2
Water Flow Rating	2
Nutrient Retention	2
Flood Control	2
Food Chain Production	3
Wildlife Habitat Value	
Waterfowl	2
Upland Game Birds	2
Song Birds	2
Raptors/Owls	2
Furbearers	2
Small Mammals	2
Ungulates (Deer)	3
Large Predator	2
Fisheries Habitat Value	
Montana Fishes of Special Concern	NA
Trout	
Other Salmonids	
Non-Salmonid Game Fish	
Rough or Non-Game Fish	

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DATA FORM

Project Site: 32 9015(11)
Applicant/Owner: MDT

Date: May 20, '992
State: MT County: Flathead
Plant Community #/Name: Douglas Fir/Idaho Fescue

Note: If a more detailed site description is necesssry use the back of dsta form or s field notebook.

VEGETATION

Dominant Plant Species	Indicator Status	Stratum	Dominant Plant Species	Indicator Status	Stratum
1. Watercress	OBL				
2. Cattail	OBL				
3. Willows	FACW				
4. Dogwood	FACW				

Percent of dominant species thst are OBL, FACW, and/or FAC 20% OBL
Is the hydrophytic vegetstion criterion met? Yes X No
Rstionale: The area is dominated by OBL Species

SOILS

Series/Phase: Typic Fluesquents
Is the soil on the hydric soils list? Yes X No
Is the soil s Histosol? Yes X No
Is the soil: Mottled? Yes X No
Matrix Color: Black
Other hydric soil indicators: Saturated
Is the hydric soil criterion met? Yes X No
Rstionale: Visual

Subgroup: Undetermined
Histic epipedon present? Yes No
Gleyed? Yes No
Mottle Colors:

HYDROLOGY

Is the ground surface inundated? Yes X No
Is the soil saturated? Yes X No
Depth to free-standing water in pit/soil probe hole: 0
List other field evidence of surface inundation or soil saturation. Visual
Is the wetland hydrology criterion met? Yes X No
Rationale: Visual

Surface Water Depth: 0-1"

JURISDICTIONAL DETERMINATION AND RATIONALE

Is the plant community a wetland? Yes X No
Rstionale for jurisdictional decision: Visual

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VI. Plans and Site Location Map

acceptable for wetland development, not later than 20 days prior to beginning wetland construction.

4) The contractor shall notify the engineer in writing of the date that operations will begin on a wetland replacement site at least 48 hours in advance of disturbing the area.

D. Wetland Design

1) Slope and contour of wetland development sites:

a) At least 50% of the shoreline of a developed flooded wetland shall have a slope of 10:1 or flatter. No more than ten percent of the shoreline of a flooded wetland shall have 3:1 or steeper slopes. Islands are excluded from the above requirements.

b) Flooded wetlands shall have an average water depth between 1 foot and 6.5 feet during the inspection period, except as necessary to provide required slope near the shoreline.

2) Islands:

a) Flooded wetlands larger than 2 acres shall have approximately one island per two acres of flooded area. Islands shall have a minimum of 400 square feet and a maximum of 500 square feet of surface area above the water at design water level. Islands shall be a minimum of 125 feet from shoreline and a minimum of 125 feet apart. A minimum of 25% of the surface area of each island shall be at least 2 feet above the design water level. The exposed area of islands is included in the total area of wetlands constructed.

3) Topsoiling of Wetlands:

a) All available topsoil shall be salvaged from areas to be developed as replacement wetlands prior to beginning excavation. The topsoil shall be stockpiled outside the construction limits.

b) Following final grading, the contractor shall place topsoil on all disturbed areas of the developed wetlands above the water line to a minimum depth of 2", including the shoreline of flooded wetlands. If insufficient salvageable topsoil is available from wetland development areas, the engineer may require that topsoil salvaged from the highway project be used in the wetland development. Topsoil obtained from the highway development for use in topsoiling wetlands will not be paid for separately, but will be included in the cost per acre of wetlands mitigation.

c) The contractor shall obtain approval from the engineer prior to placement of the topsoil.

4) Revegetation of Developed Wetlands:

a) All developed wetland sites, including the non-flooded area of islands, shall be fertilized and seeded according to the project seeding special provisions, subsequent to planting of shrubs or trees. Flooded areas are not to be seeded or fertilized.

b) all disturbed areas that are not flooded in wetland development sites, including islands, shall be seeded.

c) All areas outside the confines of wetland development sites that are disturbed by the contractor during the construction or development of the wetland shall be reclaimed to the satisfaction of the engineer at no cost to the State.

E. Inspection and Acceptance

Each phase of wetland development (see item 5) shall be subject to inspection by the engineer prior to payment. Upon notification by the contractor that a wetland is completed, the engineer will conduct a final acceptance inspection.

F. Method of Measurement

Wetland mitigation will be measured by the acre to the nearest 0.1 acre, or above mean water level, for the number of acres mitigated in accordance with the plans and specifications.

G. Basis of Payment

1) Wetland mitigation will be paid for at the agreed price per acre which shall be full compensation for furnishing the following: labor, tools, equipment, incidentals; materials including seed, fertilizer, and plant material; and for obtaining land usage permits, agreements, water rights or permits and easements that are necessary to complete the work in accordance with the contract.

2) All costs incurred by the contractor through the use of topsoil obtained from the highway portion of the project for wetland development shall be included in the agreed price for Topsoil Salvaging and Placing. No additional payment will be allowed for increased haul distance and extra handling.

The cost of removing and replacing topsoil in the wetland development areas shall be included in the agreed price for Wetland Mitigation.

Payment will be allowed for development of wetland acreage that exceeds the required as determined by the Department.

No payment will be allowed for existing wetlands incorporated into newly created wetlands.

Percentages of the contract quantity for wetland mitigation will be allowed for payment on progress estimates as follows:

a) 15% - When wetland mitigation plans are submitted and accepted.

b) 60% - When wetland replacement areas are graded and topsoiled.

c) 30% - When wetland replacement areas are fertilized and planted.

d) 100% - When wetland replacement areas are accepted by the engineer.

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VIII. Contractor
Wetland Replacement Incentive

If the contractor options to provide wetlands, the contractor will be paid a predetermined amount of payment per acre to produce a predetermined amount of wetlands to the following specifications:

Payments will be a contract item as specified for developed wetlands approved by the Department.

A. General

1) Static ground water will be determined by pre-testing the site and demonstrating availability of sufficient water to maintain the wetland, including water rights.

2) The contractor shall be paid for the newly created acreage, with a minimum of 5 acres up to 10 acres.

3) The contractor shall obtain landowner permission and all permits and agreements necessary for wetland development and protection. A wetland easement must be obtained or the area deeded to a wetland agency, U.S. Fish & Wildlife Service, Montana Fish, Wildlife & Parks or Ducks Unlimited. The contractor shall obtain all necessary Corps of Engineers 404 permits and other federal and state permits when wetland development impacts existing wetlands.

4) All wetlands created by the contractor shall be approved by the department prior to construction and prior to final payment.

B. Definitions

The following definitions will apply to terms used in these provisions:

WETLAND - Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

FLOODED WETLAND - A wetland that has standing water above the soil surface during some part of the growing season.

SATURATED WETLAND - A wetlands which has saturated soil conditions at or very near the soil surface during some part of the annual growing season.

GROWING SEASON - The growing season for the geographic region of this project is defined as approximately 110 days, beginning April 15.

WATER DEPTH - The average depth of a flooded wetland at the design water level.

DESIGN WATER LEVEL - The average water surface elevation, as measured by the engineer, on the planned wetland during the inspection period. This applies to surface and groundwater of both flooded and saturated non-flooded wetlands.

SHORELINE - The water's edge around the boundary of a flooded wetland.

REPLACEMENT WETLAND - Developed and revegetated areas in which the soil is saturated to its surface by groundwater or flooded to a maximum depth of 6.5 feet during the growing season. The water source may be runoff from direct precipitation, headwater, or backwater flooding, groundwater, or some combination of these sources.

C. Mitigation Requirements

1) The types and approximate sizes of wetland areas impacted by this project are listed below:

P1 - Palustrine Type 1 - Riparian forested wetland. Has cottonwood with scattered willow, dogwood, and/or alder. This is a seasonably or intermittently saturated type wetland.

P2 - Palustrine Type 2 - Willow/dogwood with shrubs or sedge/grass. This is a seasonally or permanently saturated type wetland.

P3 - Palustrine Type 3 - Sedge/rush/forb herbaceous vegetation, including cattail/bulrush if not flooded. This is a seasonally to permanently saturated type wetland.

R1 - Shallow march or pond, including old river channels. This type of wetland is seasonally, or permanently flooded to a maximum depth of 6.5 feet. It usually includes some bordering emergent vegetation, such as cattails or bulrushes, which is rooted under the water.

2) All of the above types are acceptable for replacement wetland development. A minimum of 4.0 acres of type R1 wetland shall be developed for wetland replacement, or the contractor may elect to construct all of the required and optional acreage of type R1. Not more than 1.0 acres of credit will be allowed for any one of the types P1, P2, or P3 wetlands. CONVERSION OF AN EXISTING WETLAND TO A DIFFERENT TYPE IS NOT ACCEPTABLE. UNAUTHORIZED ACTIVITY IN EXISTING WETLANDS MAY RESULT IN LEGAL ACTION BY THE CORPS OF ENGINEERS UNDER THE AUTHORITY OF THE SECTION 404 REGULATORY PROGRAM.

3) The contractor shall submit a plan to the engineer specifying the intended development of each wetland replacement site. The plan shall contain a legal description and estimated area of each site, a description of the existing land use or vegetation, specify the type of replacement wetland, and explain how it is to be developed. The plan shall include maps, sketches, cross-sections, and diagrams as necessary for clarification. The plan shall also include sufficient test data; such as test hole/excavation data, precipitation/runoff data, or water appropriation documents as necessary to allow the engineer to concur with the plan's design water level determination. If the engineer deems this data/information insufficient, the engineer may require additional documentation of water availability before acceptance of the plan. The contractor may request verification from the engineer that the mitigation site is not an existing wetland, or that the site selected is

Appendix E: Private Consultant's Report

FLATHEAD COUNTY ROAD DEPARTMENT
Mailing Address: 800 S. Main
Delivery Address: 1249 Willow Glen Drive
Kalispell, Montana 59901
Phone 752-5300 Ext. 353 or 354

cc: Lajoie
~~Jim Hill~~
Edie Vinso
4-16-93

RECEIVED
APR - 5 1993
MONTANA DEPARTMENT OF TRANSPORTATION
KALISPELL, MONTANA

MASTER FILE COPY

April 1, 1993

APR - 6 1993

Mr. Larry Brazda
Montana State Highway Department
P. O. Box 400
Kalispell, MT 59903-0400

Dear Larry:

I thought you might like a copy of Mr. Lichtenstein's report on the Swan River Bridge.

I don't see that it says anymore than what the State or County has said in the past. The County Commissioners will also get a copy of this report from me.

Sincerely,

Marc E. Pitman
Superintendent

MEP:lmw

enclosure

DATE RECD 4-9-93
BRIDGE BUREAU
CHIEF
ASSIST CHIEF
ADMIN. ASSIST
AEIGLENO
CHECKERS
CADD
FILE

ABBA LICHTENSTEIN, P.E., DR. ENG. (hc)
CONSULTANT
26 Trafalgar Road
Tenafly, New Jersey 07670

(201) 567-7381
Fax (201) 567-3741

National Council of Engineering Examiners
Cert. # 4038

March 15, 1993

Save the Swan River Committee
C/O Tammy and Gary Riecke
P.O. Box 363
Bigfork, Montana 59911

Re: Swan River Bridge at Ferndale (Kearney Bridge)
Flathead County, Montana

Gentlemen:

As requested I came to Bigfork on Friday, February 19, 1993 and commenced my fact finding assignment regarding the Swan River Bridge dilemma: rehabilitate or replace.

General

Bigfork, Montana is a charming rural town full of shops, galleries, restaurants and similar establishments. Outside of town there are fields, hills, streams and mountains. The roads and bridges are being maintained by Flathead County which is the governing body for all of Bigfork except the School Boards.

My Activities in Bigfork included the following:

1. I reviewed several structure inventory and appraisal (SIA) sheets provided by the Committee. They included Swan River Bridges at Bigfork, dated 1989, and for the Kearney Bridge (1992), with some pertinent notations.
2. I visited the sites of these two structures, took some photos. made some

measurements and notes. I was assisted by Messrs. Riecke, Brown, Claude and others. The observations included the superstructure of the truss; several panels and connections underneath; and the timber approach spans at theFerndale location.

3. I met with the Flathead County Superintendent, Mr. Mark Pitman and the County Supervisor of Bridges, Jack Lingo and discussed the situation.
4. I interviewed a Mr. Art Whitney who has lived in the area for all of 82 years and was familiar with the history of the Swan River and the two bridges.
5. Other citizens of Bigfork also contributed information on traffic patterns, accidents and more.

CAVEAT, the sum total of my activities cannot be considered an in-depth inspection, as specified by AASHTO manuals, but provided me with sufficient information to evaluate the problem at hand. An in-depth inspection should include calculations, material testing, underwater and scour probing and a tactile hands on inspection of all the elements of the bridge.

FINDINGS

1. The Kearney Bridge at Ferndale is composed of a metal truss (probably steel) about 152 feet long, 8 panels at 19'. It is of a patented Pratt design with counters, and was built by the A.Y. Bayne & Co. of Minneapolis in 1911. The steel was provided by Illinois Steel Company. There is evidence that the bridge has been impacted by a truck which severed the first vertical and displaced the second vertical, both on the downstream side. The repair of the broken member consists of re-welding and a cable and lasted 40 years (Whitney). The floor beams and connecting rivets and bolts are probably original; the stringers and deck are timber. The bridge is located several hundred feet upstream of a dam (1900+/-). Floods in 1930 (Whitney) caused the approach fill to be washed out at both ends. The County "converted" the abutments to piers and added several timber spans on each end of the truss. The 1992 SIA sheet indicated that the historical significance (037) was "not eligible". "5" means not eligible. The average daily traffic was marked as 100; no trucks (because of a 3Ton posted limit). The bridge provides about a 15' roadway between the trusses. Informally, I was told, that two accidents had happened in the vicinity of the structure in the last five years. The horizontal alignment at the approaches is poor but visibility is adequate. There is ample vertical clearance. The truss needs a paint job.

2. The bridge in Bigfork is a similar, but a shorter, pratt truss of Illinois steel and constructed by the Bayne Co. It appears to have been painted recently, and has a steel stringer and timber deck roadway. Some elements of the trusses need repair or tightening. It is located in the vicinity of a pumped storage power plant (1900-Whitney), and the truss supplements and compliments the gateway into Bigfork. The SIA sheet of 1989 has a "5" notation, which means, it was found to be not eligiblefor the REGISTER..

Historic Matters

The State Historic Preservation Office (SHPO) and the Montana DOT should be contacted early to find out what is the eligibility status and how determined for the two bridges. Of course, the Kearney Bridge issue is more pressing. If the Bridge status (eligibility) is modified to be "eligible" then a new ingredient has been added and certain Federal processes need to take place, notably 106. If the answer is definitely not eligible , then the problem of rehab vs. replace will have to be solved on an economical/political basis.

Discussion

The 1911 Kearney Truss (Ferndale) can be rehabilitated. The timber stringers should be replaced and the timber approach spans reconstructed. The truss should be cleaned and painted. To evaluate its capacity, accurate live load rating calculations should be made including material sampling. A prudent activity may be a nondestructive load test, with

the help of the Montana State University (Bozeman). Independent appropriate guide rails will need to be installed along the trusses. After the indepth inspection, calculations and testing, the cost of such rehabilitation can be estimated with confidence. The rehabilitation work will provide for a greater and more reliable live load capacity, but the width of the roadway will not be increased. A one lane bridge, however, can be properly signed and signaled, if the traffic counts are small and visibility or signals are adequate.

A new structure at this location is proposed and will be designed and constructed by the Montana DOT in accordance with their standards. The cost of such a bridge should consider the expense of approach alignment improvements, right-of-way, and demolitions of the existing bridge. A study may be needed to decide whether a sidewalk and/or bicycle path on the new bridge would be desirable features.

The truss at Bigfork should be placed on a regular maintenance program so that it can be kept in service for many years. This is especially true for this truss, which should be judged historically eligible, when considered in concert with the Power Plant and the Gateway to Bigfork.

Summary

I believe the following steps have to be undertaken before a final decision can be reached:

1. Contact State and Federal agencies to learn what Historic Eligibility status is for the Kearney Bridge. At the same time a discussion of the historicity of the Bigfork Bridge may commence (?)
2. If the rehabilitation alternate is to be explored by the citizens and County, prepare a "rationale" why a one lane bridge at Ferndale is sufficient. If such a solution is acceptable to the State and FHWA, then the rehabilitation costs can be borne by these agencies as in a "new bridge" scenario.
3. In cooperation with the County, an indepth inspection, calculations and testing should be performed for the two Swan River structures. These activities will provide a more accurate live load rating for the structures and possibly permit the crossing of fire and maintenance trucks, buses and public safety vehicles.
4. In cooperation with the County, establish a maintenance program for the Bigfork Bridge.

I trust that you will find this Informal Report satisfactory and of assistance to you in resolving the Swan River Bridges at Kearney and Bigfork dilemma in an acceptable manner to you, the Flathead County citizens and governing body.

Thank you.

Very truly yours,

Abba Lichtenstein

Consultant

AL/dl

encl.

Appendix F: Visual Assessment

Visual Impact Assessment

Swan River Bridge - West of Ferndale
Flathead County
BR 9015 (11)
C# 1132

Date of Assessment: April 19, 1993
Weather:Spring Rains all day, 45' to 50'F, overcast

Date of Report: April 20, 1993
Revised: August 12, 1993

Assessment Performed by
Shannon R. Schultz, CE Spec I - MDT and,
Jeff Berglund, Biologist - MDT

Abstract

This assessment was done to determine the visual impacts of the existing aesthetic values in and around the Swan River valley by the bridge located in T27N, R19E, Section 32, two miles East of Bigfork and west of Ferndale in Flathead County, Montana. Furthermore, the intent of this report is to examine what impacts would result if Alternative C - Build a new 163' Bridge is built. This Visual Impacts Assessment was done as part of an Environmental Assessment.

Lists of possibly unfamiliar terms and their definitions are included in the Appendix. Additionally, the applicable laws and regulations concerning Visual Impact Assessments are included in the Appendix of this report.

Background

Flathead County, in cooperation with the Montana Department of Transportation, is planning to improve a bridge over the Swan River near Ferndale on a paved county road (off-system) approximately 2 miles northwest of Ferndale and 2 miles east of Big Fork, Montana. The project is located in the eastern ½ of the southeast ¼ of Section 32 in Township 27 North, Range 19 West. The road which contains the crossing is owned and maintained by Flathead County.

This proposed action (described in the Environmental Assessment as Alternative C) consists of replacing the existing 276-foot pony-truss bridge (timber approach spans included) with a new 163-foot long concrete structure. A new bridge would provide for better safety meeting current highway standards, including new approaches at both ends. The proposed bridge includes a 26-foot wide roadway.

Guardrail would be placed at the proposed bridge ends. The proposed bridge would have 30 mile-per-hour design speed as determined by the sharp curves at both bridge approaches. The horizontal alignment found on Alternative C would be shifted 10 feet downstream and run parallel to the existing centerline. This would lessen the sharpness of the approach curves. The proposed bridge would meet all design standards for off-system bridges.

The Swan River Bridge - West of Ferndale carries residential/commuter traffic serving the Big Fork and Ferndale vicinity. This bridge location also provides for the most direct route from Ferndale to the towns of Swan River and Echo Lake. The nearest major transportation routes are as follows: U.S. Highway 83 (also known as Federal Aid Primary Route 83) is approximately 2½ miles due east and also 2½ miles due north of the bridge. U.S. Highway 35 (also known as Federal Aid Primary Route 52) runs north and south through Big Fork, 2 miles due west. Highway 35 is the only logical route from Pablo to Kalispell on the east side of Flathead Lake. Highway 83 lies farther east of Flathead Lake serving access to many recreation areas from as far southeast as Salmon Lake.

A smaller arterial connects Highway 83 and 35 which is less than 100 feet south of the bridge site; Federal Aid Secondary Route 209. Secondary Route 209 is approximately 4 miles long starting in Big Fork, then going east through Ferndale terminating at Highway 83.

There is a gravel road that parallels Secondary route 209 on the north side of the Big Fork Dam reservoir which heads west from the bridge and terminates at the Bigfork Dam. County personnel claim that joggers and bikers use this road for recreation.

The Swan River Bridge - West of Ferndale is an 82-year-old steel truss bridge. It is functionally obsolete *and* structurally deficient having a sufficiency rating (SR) of 20.2 [*MDT's Structure Inventory and Appraisal* - 06/13/89]. Therefore, as set forth in MDT's Bridge Management Program criteria for off-system bridge funding, it is eligible, and has been nominated by Flathead County, for replacement.

The existing bridge is structurally deficient because the deck, wearing surface, railing, bearing devices, paint, piers, caps, and bracing are in need of repair. Additionally, timber members in the approach spans are rotting. Because of the deteriorating structure, the bridge has a posted safety load of 3-tons.

A standard load rating for bridges with the types of traffic the bridge carries is 36-tons. Because of the low rating, fire trucks, school buses, garbage and septic trucks, and any other larger-than-normal truck loads cannot cross the bridge. This fact puts people's lives and properties at risk while also increasing operating costs for local services as well as other industries such as TCI Cable and United Parcel Service.

The existing bridge is functionally obsolete because it has a 3-ton posting for safety where its use warrants a 36-ton loading. Additionally, the existing structure is 16.5 feet wide serving only one lane of traffic. The standard minimum width bridges is 24 feet which serves two, twelve-foot lanes of traffic.

A formal Traffic Analysis across the existing bridge has not been done. County personnel say that between 150 and 200 vehicles cross it daily. Records from Highways 83 and 35 have shown an annual increase of 8% in traffic volume.

From this data, it may be deduced that a 5-8% increase has occurred across this bridge. In 20 years, 300 to 400 vehicles are expected to cross the Swan River daily at this location if current growth patterns persist.

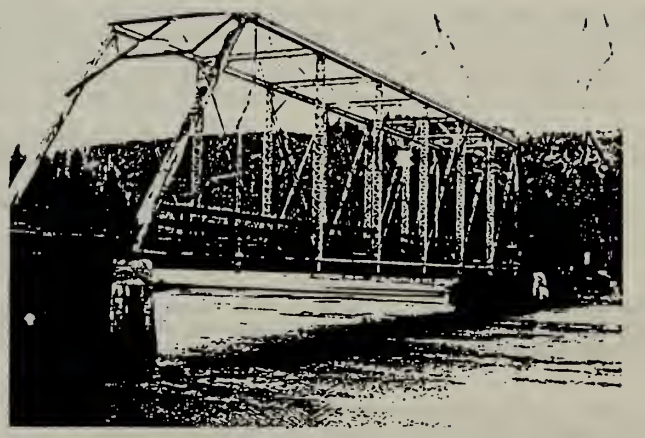
The proposed bridge would allow larger trucks and buses into the area. Because of the sharply curved approaches to the bridge, speeding across the bridge is discouraged and can be dangerous. However, because there is a steep downhill approach coming from Ferndale, some wintertime accidents have occurred.

Over the last five years, two, single vehicle accidents have been recorded in the vicinity. One accident occurred close to the bridge (within 150 feet of intersection); the car lost control while failing to negotiate a curve. The other was an east-bound car on Highway 35. No fatalities occurred. Both accidents occurred in 1988.

The proposed project shifts the centerline of the road downstream 10 feet. By so doing, the sharpness of the approach curves are lessened thereby increasing safety. The proposed project additionally raises the elevation of the bridge deck two (2) feet which decreases the steepness of the approach when turning off of Route 209.

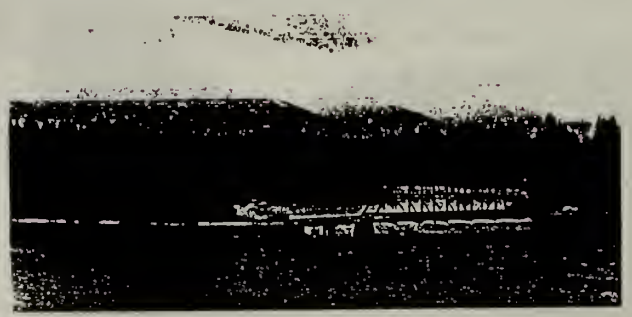
Findings

It has been determined that there are 5 Viewsheds of the bridge. Each of these viewsheds and their discussions are presented individually in the following pages. Since the proposed bridge's alignment is 10 feet downstream of the existing bridge, all viewsheds from the bridge would remain virtually unchanged with the exception of the truss. The proposed bridge would eliminate the truss members so they would not obstruct a person's view of the river, mountains, and ridge tops while crossing. A second change from the bridge would be additional exposure of Route 209 while crossing the bridge going south on Route 209. Due to the proposed 2.5 increase in elevation of the bridge deck and the 10-foot shift in alignment downstream, additional exposure of Route 209 would be furthered by the clearing of mature trees which currently mask Route 209. The trees need to be removed to accommodate the safer alignment.



Viewshed 1 - At the Boat Launch Between Route 209 and the South Edge of the Swan River - From this view, the bridge deck is higher than eye-level while standing at the river's edge, though the water level varies. The closest piece of the bridge is the south end; about 30 feet away. Existing conditions as well as expected conditions after construction of Alternative C remain at medium. Each condition earned a score of 4 for Visual Quality (a 1 is very low, while a 7 is very high like Niagara Falls or Yosemite Park).

From this perspective, the bridge is so close it dominates. The river is second, the mountains and sky third in what attracts attention to the eye because of the relative scale of the bridge. As can be seen in the picture, the surrounding mountains are huge and seem to contain or hold the river valley, including the bridge. The existing timber approach spans are visible from this perspective. Their decaying state is noticeable.



Viewshed 2 - Looking Left to the Bridge from Route 209 on the South Side of the Swan River - This picture was taken from the shoulder of Route 209 about 1200 feet from the center of the bridge and approximately 35 feet higher. A person traveling this close to the shoulder would be going the other way (heading east toward Bigfork) and would not likely look this direction. The westbound passenger would not see the bridge until after coming down the crest on Route 209 but would likely be looking to his left at the Swan River Valley and surrounding mountains as the view to his or her right is densely forested hillside offering little diversity in scale, depth, or texture.

Additionally, the travelling speeds on Route 209 are between 50 and 60 mph so the view of the existing bridge would be short in duration; on the order of 2 or 3 seconds. Also, since this perspective is farther away, the bridge is moved to the middle-ground and looses much attention because of its small scale relative to the vast background of mountains and sky. The Swan River is in both middleground and background providing depth while looking up the river valley. The new existing bridge acts as a hiatus from this perspective, as a new bridge would. However, the proposed improvement as defined in Alternative C would detract more from this viewpoint than the existing structure primarily because of the loss of trees that would be removed. The existing viewshed has a score of 5 for overall Visual Quality while Alternative C would have a score of 4.

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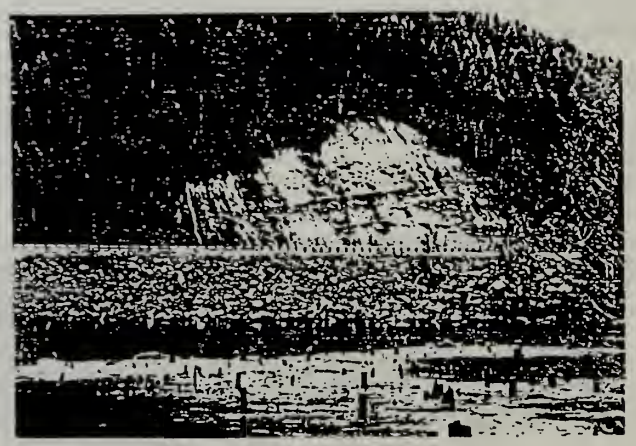
Viewshed 3 - Off Gravel Road on the North Side of the Swan River Looking Upstream - This picture was taken 2 feet from the water's surface on the north bank of the Swan River to emulate what a floater might see while looking upstream. The bridge is approximately 1200 feet away. Once again, the bridge is somewhat lost in the beautiful panoramic background of green mountains and sky. The river appears to be pooled like a lake in the foreground but then disappears as the eye moves upstream adding depth. While gazing about, the eye encounters cut-off stumps poking through the river's surface as well as the bridge. Because of these and one other man-made encroachment (see next page), the overall score for Visual Quality is medium: a 4 for the existing and a 3.33 for the proposed. The lower score for the proposed project is attributable to the loss of the trees which would expose more of Route 209 and the cars travelling upon it.



Viewshed 3 - Looking Straight Across Swan River; Bridge to the left - Note that this viewshed is the same as the previous one; Viewshed 3. The purpose of this picture is to show what scenery lies to the right of the bridge. This view is clearly visible as one pans right as there are no visible obstructions while looking across the river. One can see this view in their peripheral vision while looking at the bridge. The detraction is the large fill slope directly across the river seen in this photo. The fill and rip-rap disrupt the harmony of the setting. The rough texture of the gray Class I and Class II rip-rap contrasts with the colorful, smoother textured foliage and imposes on the riverbank and mountainside. Additionally, guardrail can be seen above this are which also detracts from the visual experience,

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Viewshed 4 - Looking South Across Bridge While Standing on Center of Curve of paved Road that Serves Local Residents on the North Side of the Swan River - This viewpoint is included to illustrate what a local resident sees while leaving the area and crossing the bridge heading for Bigfork or Ferndale. This location is also where the gravel road paralleling the Swan River on the north side joins with the paved road. Note how the existing bridge dominates the view due its close proximity.

Most of Route 209 is hidden from view because of its higher elevation. Also, the wooden approaches appear in greater detail as well as the aged state of the bridge. Warning signs for the crossing and load rating are also visible. Little of the scenery is viewable without looking left or right (up or downstream). Therefore, the overall score for Visual Quality for the existing condition is 3.7, while the overall score for Alternative C is 4, a very minor positive impact. The improvement in visual quality is due to the absence of the timber approaches, signs, and truss. Also, the large gray fill encroaches on the aesthetics of the area from this view as it can be easily seen while looking downstream and across the river (shown in second picture for Viewshed 3).

Viewshed 5 - Upstream 1500 Feet While Looking Downstream to the West at the Bridge from the South Bank of the Swan River - This picture was taken to emulate what a floater might see moving toward the bridge. Because of the thick shrubs, bushes, and trees along the right-hand side of the roadway while traveling west, it is unlikely that a traveler would be able to see the bridge from the roadway -- even during winter months.

Like before, with an increase in distance comes an increase in the field of view. The bridge site appears small in scale compared to the context in which it is located. From this perspective, the bridge site is less imposing by playing less of a role in the overall aesthetics. Details such as the timber approach are no longer seen. The horizon formed by ridge tops and sky now attract more attention. In the autumn, the aspen trees and shrubs would fill the mostly forested valley with patches of yellow and reds attracting more attention to the "natural" and away from the "man-made" surroundings. Resultingly, a score of 5.33 for overall Visual Quality is given to both the existing and Alternative C conditions.

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Results

The above data suggests that the proposed bridge improvement would cause minor detriments to the aesthetic value and overall visual quality in the area. The findings demonstrate that the farther one gets from the bridge site, the less impact it would have on the visual qualities represented in the area. The converse condition is also true: the closer one gets to the bridge site, the greater its affect on visual experience.

The *majority of the people* seeing this bridge would be the ones traveling east and west on Route 209 at more of a "macro" level -- when the bridge is in the distant middleground or part of the background.

The *people most frequently* seeing the bridge site are the visiting recreationists to the area and/or the local residents coming off of Route 209 and crossing the Swan River in order to get to their homes. At this "micro" level -- where the bridge is more a part of the middleground and foreground -- the minor changes in the aesthetics of the area would be more noticeable due to proximity. However, the changes outlined in this assessment are shown to be minor because bridge crossings at this location plays such a small role in the general visual quality of the beauty in the Swan River Valley.

Conclusions

Though the data shows no significant losses in the visual qualities of the area from the crossing improvement the Swan River as described in Alternative C , it is anticipated that the residents in the area and of Bigfork would perceive a change in the over-all visual quality of the area. This change may be attributed to the absence of the steel truss that has been standing since 1911. The truss has become a signal to westbound motorist informing them that Bigfork is 2 miles away. Also, for floaters, the bridge has been a signal to move toward the left bank and prepare for pulling into shore since this is the last easily accessible take-out before the Bigfork Dam.

While in truth, if Alternative C were built, there would still be a bridge there, only a different looking one. It would be wider and safer and a little higher, and some of the trees would be gone. Where there is now an 82-year-old steel-truss bridge, a new concrete stringer-type bridge would stand.

If there is controversy between the aesthetics of the proposed bridge and the existing bridge it would be problematic -- borne out of what is perceived by the different viewers. Arguably, the fact of change is the source of discomfort rather than its nature or the change itself. The perceived visual impacts are made up of the *visual resource* change combined with the *viewer response*. This report demonstrates that the visual resource change is minor while the viewer response varies with each viewer.

End Notes

This assessment has provided an objective approach to quantifying characteristics which are difficult, at best, to qualify. This conclusion was arrived at using a manual entitled "Visual Impacts Assessment for Highway Projects" provided by the U.S. Department of Transportation's Federal Highway Administration and the Office of Environmental Quality. The goals of this manual are to provide a means of objectively quantifying that which is subjectively perceived through a qualitative analysis. This is done using the concepts of art and architecture involving vividness, intactness, unity, form, lines, color, texture, and other art and architectural techniques. The purpose of this manual is to provide a background of information in order to perform a step-by-step outline for a Visual Impact Assessment. For more information on how this assessment was prepared, consult the manual mentioned above.

APPENDIX A - LEGAL CONTEXT

A number of federal laws and regulations bear on the assessment of highway project visual impacts. Some of their most relevant portions are abstracted here for reference.

Historic Preservation Act of 1966 - Section 106 require federal agencies with jurisdiction over federal, federally-assisted, or federally-licensed projects to "take into account the effect of the undertaking on my district, site, building, structure, or object that is included in the National Register." This has been amended to provide equal consideration for any feature determined to be eligible for inclusion in the National Register.

The 1976 regulations implementing this act define "criteria of adverse effect" (Section 800.8), including the "introduction of visual, audible or atmospheric elements that are out of character with the property or alter its setting."

Department of Transportation Act, Section 4(f) - This section was amended by the Federal-aid Highway Act of 1968 to read: "It is hereby declared to be the national policy that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites ... The Secretary shall not approve any programs or project which requires the use of any publicly owned land from a public park, recreation area, or a wildlife and waterfowl refuge ... or any land from an historic site .. unless (1) there is no feasible and prudent alternative ..., and (2) such program includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site resulting from such use."

The National Environmental Policy Act of 1969 - Section 101 (b) (2) states that it is the "continuous responsibility" of the Federal Government to "use all practible means " to "assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings."

Sections 102 (2)(A) and (B) of the National Environmental Policy Act (NEPA) require all agencies of the Federal government to "... utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision-making which may have an impact on man's environment;" and to "identify and develop methods and procedures ... which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decision-making along with economic and technical considerations."

C.E.Q. Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, 1978 - Section 1502.16, Environmental consequences: "... The discussion will include the environmental impacts of the alternatives including the proposed action (and) any adverse environmental effects ...It shall include discussion of ..(g) urban quality and cultural resources, and the design of the built environment."

Section 1507.2 Agency capability to comply: Agencies shall "...identify methods and procedures ... to insure that presently unquantified environmental amenities and consideration."

Section 1508.8 Effects: "Effects and impact .. are synonymous. Effects include ecolological,

...aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects."

Department of Transportation Notice 5610.1C, Attachment 2-Guidance on Format and Content of Environmental Documents - "This notice implements a Secretarial decision of 7-31-77, as recommended by the DOT Task Force un Design, Art, and Architecture in Transportation, that, where relevant, the Department will require consideration of design quality to be reflected in environmental impact statements (EISs). This notice is to provide further impetus to c constructive blending of aesthetics and functiun ... Design quality considerations are relevant and are to be documented in EISs where such facilities as ..major urban highways are in sensitive locations (such as parks or historie district), or where public use areas are involved. These examples are not all-inclusive."

Federal Highway Administration supplementary guidance and procedures for EIS processing. Appendix FHPM 7-7-2, 1981 - "prudent use of photographs, illustrations and other graphics within the text can be effective in giving the reviewer an understanding of the area ..."

"Visual impacts: this diseussion should include an assessment of the temporary and permanent visual impacts of the proposed action. Where relevant, the EIS should document the consideration given to design quality, art, and architecture in the project planning. These values may be important for facilities located in sensitive urban settings."

Wild and Scenic River Act, as amended through November 1978 - Section 1(b) states, "it is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, other similar values shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations..."

Section 2(b) requires that river segments in the National Wild and Scenic Rivers System :be classified, designated and administered as one of the following:

(1) Wild river area - Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

(2) Scenic river areas - Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by road.

(3) Recreational river areas - Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past".

Section 10(a) directs that "each component of the national wild and scenic rivers systems shall be administered in such manner as to protect and enhance the values which caused it to be included in

said system without, insofar as is consistent therewith, limiting other uses that no not substantially interfere with public use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its aesthetic, scenic, historic, archaeologic, and scientific features.

APPENDIX B - DEFINITIONS

Systematic approaches to visual assessment and management are relatively new and a complete unified vocabulary has no yet developed. Several different federal land-managing agencies have instituted visual resource management (VRM) systems. There are many similarities between the terms used in these systems, but also some major differences.

These alternative terminologies may be a source of confusion, particularly to EIS reviewers; synonymous terms, where they exist, in parentheses follow each definition. In each case, the first synonym is from the "Visual Management System" of the National Forest Service; the second is from the "Visual Resource Management System" of the Bureau of Land Management, and the third is from the "Landscape Architecture System" of the Soil Conservation Service.

Aesthetics - The science or philosophy concerned with the quality of sensory experience; in this report, limited to visual experience.

Key View - A view of or from a project that is representative of the views that people will actually have after the project is completed; also, an important or critical view of a project (USFS:landscape control point; BLM: key observation point).

Landscape Components: - The basic physical elements that make up the landscape, including landform and land-cover (water, vegetation and manmade development)(USFS:characteristic landscape; BLM:landscape features; SCS: visual element).

Landscape Unit - An area of distinct, but nor homogeneous, visual character which is spatially enclosed at ground level; a visually identifiable place or "outdoor room"; useful for visual assessment and management, particularly of visual quality.

Landscape Type - A visually homogeneous area formed by a combination of relatively uniform landform and landcover, such as residential hillside or forested valley bottom; useful for visual assessment and management, particularly of visual compatibility.

Regional Landscape - A large area defined by similar patterns of landform and land cover, also, the characteristic visual resources of such an area; examples include the Blue Ridge and the Atlantic Coastal Plain; regional landscape classification is useful as a framework for visual assessment (USFS: character type; BLM; physiographic province; SCS; frame or reference).

Viewer Response - Measure of viewer response to change in visual resources include viewer exposure, viewer sensitivity, cultural significance and local values.

Viewers - The people who are likely to see a project; a basic distinction among viewer groups is between highway users, who will have views *from* the road, and highway neighbors, who will have views *of* the road, other groups can also be distinguished by the probable nature of their visual response to highway facilities (USFS;visitors; BLM:users; SCS: viewers).

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Viewer Sensitivity - The viewer's variable receptivity to the elements within the environment that he is viewing, affected by viewer activity and awareness; a person cannot readily notice every object and all the attributes of the objects that compose the total visual environment that compose the total visual environment (USFS: sensitivity level; BLM: visual sensitivity; SCS: landscape use).

Viewshed - All the surface areas visible from an observer's viewpoint; also, the surface areas from which a critical object or viewpoint is seen (USFS:seen area; BLM:distance zone; SCS: visibility).

Visual Assessment Unit - A subdivision of the linear viewshed of a highway project used to more precisely locate and assess site-specific visual impacts of the project; the end points should be based on visual distinctions, such as landscape unit boundaries.

Visual Character - The visual character of a landscape is formed by the order of the patterns composing it, the visual elements of these patterns are the form, line, color, and texture of the landscape's components; their interrelationships can be described in terms of dominance, scale, diversity, and continuity (USFS: dominant elements; BLM: basic elements).

Visual Compatibility - The degree to which development with specific visual characteristics is similar in character to its setting (USFS:visual absorption capability; BLM: contrast rating).

Visual Impact - The degree of change in visual resources and viewer response to those resources caused by a development project.

Visual Quality - An evaluative appraisal of the relative excellence of a view or a sequence of views; individual judgements of quality are affected by the values and activity of the viewer; nevertheless, broad consensus can usually be established on the relative quality of different landscapes within the same region; trained observers can predict the consensus based on public testing (USFS:variety class; BLM: scenic quality; SCS: visual resource quality).

Visual Resources - The appearance of the features that make up the visible landscape.

Appendix G: "Nationwide" Programmatic *Section 4(f)* Evaluation

MONTANA DIVISION

"NATIONWIDE" PROGRAMMATIC *SECTION 4(f)* EVALUATION FOR HISTORIC BRIDGES

Project № **BR 9015(11)** (P.M.S. C#1132) Description: Bridge Replacement
Project Name: **Swan River** Location: 1 mile WNW. of Ferndale

This proposed project requires use of a historic bridge structure that is on, or eligible for listing on the NATIONAL REGISTER OF HISTORIC PLACES. A description and location map/"Translite" of this proposed bridge replacement project is attached.

NOTE: Any response in a box will require additional information, and may result in an individual evaluation/statement. Consult the "Nationwide" *Section 4(f)* Evaluation procedures. See P.6 of this form for information on boxes with footnotes: [1-4], inclusive.

	YES	NO
1. Is the bridge a NATIONAL HISTORIC LANDMARK?	[ ]	X
2. Have agreements been reached through the procedures pursuant to *Section 106* of the *National Historic Preservation Act* with the following:		
STATE HISTORIC PRESERVATION OFFICE (SHPO)?	X	[ ]
ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP)?	X	[ ]
3. Any other agency/ies with jurisdiction at this location?	X	____
a) If "YES" will additional approval(s) for this *Section 4(f)* application be required?	[ ]	X
b) List of agencies with jurisdiction at this location:		
USA - CORPS OF ENGINEERS (*Section 404* Permit)	X	____
USDA - Forest Service	[ ]	X
USDA - Soil Conservation Service (*FPPA*)	[ ]	X
FEMA Regulatory Floodway (Permit)	[X][1]	____
MDEQ - Air Quality Division	____	X
MDEQ - Water Quality Division	X	____
MDFW&P - Parks Division (Fishing Access Site)	[ ]	X
MDFW&P - Wildlife Division (wetlands)	[X][2]	____
MDFW&P - Fisheries Division (*MSPA*)	[X][3]	____
MDNR&C (irrigation systems)	____	X
MDNR&C (navigable rivers under state law)	[X][4]	____
Other: FLATHEAD COUNTY	X	____

ALTERNATIVES & FINDINGS

EACH of the following **ALTERNATIVES** for this proposed project have been evaluated to avoid the use of the historic bridge:

1. "Do Nothing." (Alternative A under item **III.B.**1 on pages 9 & 10 of the attached Environmental Assessment/EA)

2. Rehabilitate the existing bridge without affecting the historic integrity of the structure in accordance with the provisions of *Section 106* in the *NHPA*. (Alternatives B-MDT & B-Muth under items **III.B.**2.a. & b., respectively on pages 10 & 11 of the attached EA)

3. Construct the proposed bridge at a location where the existing historic structure's integrity will not be affected as determined by the provisions of the *NHPA*. (Alternatives C - E, inclusive under items **III.B.**3. -5., respectively on pages 12 - 14 of the attached EA)

The above **ALTERNATIVES** have been applied in accordance with this PROGRAMMATIC *SECTION 4(f)* EVALUATION and are supported by **EACH** of the following **FINDINGS:**

NOTE: Any response in a box will require additional information, and may result in an individual evaluation/statement. Consult the "Nationwide" *Section 4(f)* Evaluation procedures.

	YES	NO
1. The "Do Nothing" **ALTERNATIVE** (A) has been evaluated and has been found to ignore the basic transportation need at this location.	X	☐
This **ALTERNATIVE** is neither feasible nor prudent for the following reasons:		
a) Maintenance — this **ALTERNATIVE** does not correct the structurally deficient condition and/or poor geometrics (clearances, approaches, visibility restrictions) found at the existing bridge. Any of these factors can lead to a sudden catastrophic collapse, and/or a potential injury including loss of life. Normal maintenance will not change this situation.	X	☐
b) Safety — this **ALTERNATIVE** also does not correct the situation which causes the existing bridge to be considered deficient. Because of these deficiencies, the existing bridge presents serious and unacceptable safety hazards to the travelling public and/or places intolerable restrictions (gross vehicle weight, height, and/or width) on transport.	X	☐
A copy of the MDT Bridge Bureau's Inspection Report for January 10, 1995 is attached to this form.	X	☐
2. The rehabilitation **ALTERNATIVES** (B-MDT & B-Muth) have been evaluated with of the following **FINDINGS**:		
a) The existing bridge's structural deficiency is such that it cannot be rehabilitated to meet minimum acceptable load and traffic requirements without adversely affecting the structure's historic integrity.	X	____

ALTERNATIVES & FINDINGS (#2 - conclusion:)

NOTE: Any response in a box will require additional information, and may result in an individual evaluation/statement. Consult the "Nationwide" *Section 4(f)* Evaluation procedures.

	YES	NO
b) The existing bridge's geometrics (height, width) cannot be changed without adversely affecting the structure's historic integrity.	X	
c) These **ALTERNATIVES** do not correct the serious restrictions on visibility (approach geometrics, structural requirements) which also contributes to an unsafe condition at this location.	X	
Are these rehabilitation **ALTERNATIVES** therefore considered to be feasible and/or prudent based on the preceding evaluations?	[ ]	X

3. The relocation **ALTERNATIVES** (C - E, inclusive), in which the new bridge has been moved to a site that presents no adverse effect upon the existing structure have also been considered under the following **FINDINGS**:

a) Terrain and/or local geology. The present structure is located at the only feasible and/or prudent site for a bridge on the existing route. Relocating to a new site — either up-, or downstream of the preferred location — will result in extraordinary bridge/approach engineering and associated construction costs (see item **II.A** on page 4 of the EA).	X	
Local geologic conditions are such that any other location in the general vicinity of the preferred site is not prudent.	X	
Any other location would cause extraordinary disruption to existing traffic patterns.		X
b) Significant social, economic and/or environmental impacts. Locating the proposed bridge in other than the preferred site would result in significant social/economic impacts such as the displacement of families, businesses, or severing of prime/unique farmlands.		X
Significant environmental impacts such as the extraordinary involvement in wetlands, regulated floodplains, or habitat of threatened/endangered species are likely to occur in any location outside the preferred site.	X	
c) Engineering and economics. Where difficulty/ies associated with a new location are less extreme than those listed above, the site may still not be feasible and prudent where costs and/or engineering difficulties reach extraordinary magnitudes. Does the **ALTERNATE** location result in significantly increased engineering or construction costs (such as a longer span, longer approaches, etc.)?	X	
d) Preservation of existing historic bridge may not be possible due to either or both of the following:		
the existing structure has deteriorated beyond all reasonable possibility of rehabilitation for a transportation or alternative use;		X
no responsible party has yet been located to maintain and preserve the historic structure.	X	

ALTERNATIVES & FINDINGS (#3. - conclusion:)

NOTE: Any response in a box will require additional information, and may result in an individual evaluation/statement. Consult the "Nationwide" *Section 4(f)* Evaluation procedures.

	YES	NO
Therefore, in accordance with the previously-listed FINDINGS it is neither feasible nor prudent to locate the proposed bridge at a site other than the "build" **ALTERNATIVES** as described.	X	☐

MEASURES TO MINIMIZE HARM

This "Nationwide" Programmatic *Section 4(f)* Statement applies only when the following **Measures to Minimize Harm** have been assured:

	YES	NO
1. Is the bridge being rehabilitated?	____	X
If "YES", is the historic integrity of the structure being preserved to the greatest extent possible; consistent with unavoidable transportation needs, safety, and load requirements?	(N/A)	☐
NOTE: If "NO", refer to item 2., following, to determine Programmatic applicability.		
2. The bridge is being replaced, or rehabilitated to the point where historic integrity is affected. Are adequate records being made of the existing structure under HISTORIC AMERICAN ENGINEERING RECORD standards, or other suitable means developed through consultation with SHPO and the ACHP?	X	☐
3. If the bridge is being replaced, is the existing structure being made available for alternative use with a responsible party to maintain and preserve same?	X	☐
4. If the bridge is being adversely affected, has agreement been reached through the *Section 106* process of the *National Historic Preservation Act* on these **Measures to Minimize Harm** (which will be incorporated into the proposed project) with the following:		
SHPO? (Date: 27-Feb-92)	X	☐
ACHP? (Date: 16-Mar-92)	X	☐
FHwA? (Date: 27-Feb-92)	X	☐
A copy of the **Programmatic Memorandum of Agreement** (**P.M.o.A.**) including its amendments signed/approved by these agencies is attached.	X	☐

COORDINATION

There has been additional **COORDINATION** with the following regarding this proposed project (other than those listed previously):

City/County government: FLATHEAD COUNTY

Local historical society: Save the Swan River Committee

Adjacent property owners: MDNR&C, Pacific Power & Light C°, Barbara Bennetts

Others: Friends of the Wild Swan

Copies of letters from these agencies regarding this proposed project are attached. This proposed project is also documented as a Environmental Assessment (EA) under the requirements of the *National Environmental Policy Act* (**42 U.S.C. 4321**, *et seq.*).

SUMMARY & APPROVAL

The proposed action meets all criteria regarding the required **ALTERNATIVES**, **FINDINGS**, and **Measures to Minimize Harm** which will be incorporated into this proposed project. This proposed project therefore complies with the July 5, 1983 Programmatic *Section 4(f)* Evaluation by the U.S. DEPARTMENT OF TRANSPORTATION's Federal Highway Administration.

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.

Joel M. Marshik, P.E.
Environmental Services Manager

Date: Aug 3, 1995

Approved: _____
For FHWA Division Administrator

Date: 8-3-95

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

JMM:KMH:asj:**[*.SWAN]P4F.FRM**

Attachments

cc: J. T. Weaver
C. S. Peil
J. P. Kolman
T. E. Martin
M. A. Wissinger
D. W. Jensen
J. M. Marshik
W. O'Brien, MDNR&C-NWLO

Notes on boxes with responses under item 3.(b) from page 1:

[1] FLATHEAD COUNTY administers the FEMA Floodplain Development Permits on the Swan River. This proposed action will be in compliance with E.O.№ 11988 (see item **IV.C.**1. on EA page 19).

[2] The MDFW&P Wildlife Division's Waterfowl Coordinator was contacted about this proposed project, and responded in early June, 1992 (copy of letter attached). A Wetlands Finding on this proposed project's wetlands impacts is also attached (see item **IV.C.**3. on EA pages 20 & 21, and its Appendix D).

[3] The MDFW&P Fisheries Division's Stream Protection Coordinator was also contacted about this proposed project, and responded in late July, 1992 (copy of letter attached). A ***124SPA* Stream Protection Permit** will be necessary for this proposed project (see also item **V.** on EA page 28).

[4] The MDNR&C's (formerly the MDSL's) NorthWestern Land office and Environmental Coordinator have been contacted about this proposed project (see items **IV.B.**2. on EA page 17, and **VI.A.** on EA page 29).

STRUCTURAL INVENTORY AND APPRAISAL

```
********** IDENTIFICATION ********* CODE *
(008) STRUCTURE NUMBER:       L15657002+0.600-1
(002) HIGHWAY DIVISION:  KALISPELL              12
(003) COUNTY:          FLATHEAD                 29
(004) CITY:                                      0
(006) FEATURE XED.:    SWAN RIVER              008
(007) FACILITY CARRIED:       COUNTY ROAD 657
(009) LOCATION:          2M W FERNDALE
(016) LAT: 48 D  3.4' (017) LONG:  114  D  1.8'

********** CLASSIFICATION ********* CODE *
( SR) SUFFICIENCY RATING:                    21.5 %
(112) NBIS BRIDGE LENGTH:                        Y
(100) DEFENSE HIGHWAY:                           0
(021) MAINTAINED BY:  COUNTY HIGHWAY AGY         2
(022) OWNED BY:       COUNTY HIGHWAY AGY         2
(037) HISTORICAL SIGNIF:     NOT ELIGIBLE        5
( PN) PROJECT NO:                  (STA:) 000000
( DN) DRAWING NO:                         000000

********** AGE AND SERVICE ******** CODE *
(027) YEAR BUILT: 1911  (106) YEAR RECONS: 0000
(042) TYPE SERVICE: HIGHWAY      WATERWAY     15
(028) LANES ON:  1 UNDER:  0  (029) ADT:      31
(030) YEAR ADT: 93      (109) TRUCK ADT:      0%
(019) BYPASS DETOUR LENGTH:              4 MI

****** STRUCTURE TYPE & MATERIAL ***** CODE *
(043) STRUCTURE TYPE-MAIN:                     310
(044) STRUCTURE TYPE-APPR:                     702
(045) NO. SPANS-MAIN:                            1
(046) NO. SPANS-APPR:                            4
(107) DECK STRUCTURE TYPE: TIMBER                8
(108) WEAR SURF/PROTECTIVE SYS:
   A) TYPE SURF: TIMBER          7  DEPTH:   0IN
   B) TYPE MEMBRANE:          NONE              0
   C) TYPE DECK PROTECTION:   NONE              0

********** GEOMETRIC DATA ********* CODE *
(048) LENGTH OF MAXIMUM SPAN:                152FT
(049) STRUCTURE LENGTH:                      246FT
(050) CURB/SIDEWLK: LEFT:  0.0 FT RIGHT:    0.0FT
(051) BR RDWY WIDTH(CURB TO CURB):          15.5FT
(047) TOTAL HORIZ. CLEAR. (CURB/RAIL:)      15.5FT
(052) DECK WIDTH (OUT TO OUT):              16.0FT
(032) APPROACH ROADWAY WIDTH:                 22FT
(033) BRIDGE MEDIAN:  NO MEDIAN                  0
(034) SKEW:          0 D  (035) FLARED:          0
(053) MIN VERT CLEAR OVER BR. RDWY:   19FT  5IN *
(054) MIN VERT UNDERCLEAR REF:     N    0FT  0IN
(055) MIN LAT. UNDERCLEAR RT REF:  N      0.0FT
(056) MIN LAT. UNDERCLEAR LT:             0.0FT

********** LOAD RATING & POSTING ********* CODE *
(031) DESIGN LOAD:          UNKNOWN              0
(064) OPERATING RATING:                        218
(066) INVENTORY RATING:                        207
(LOAD) TYPE 3:  7 T  TYPE 3S2: 11 T  TYPE 3-3: 13 T
(POST) TYPE 3:  3 T  TYPE 3S2:  0 T  TYPE 3-3:  0 T
OTHER _____

******** CONDITION ********* CODE **** CHANGE ? ***
(058) DECK:                      4      4
(059) SUPERSTRUCTURE:            4      4
(060) SUBSTRUCTURE:              4      4
(061) CHANNEL/CHAN PROTECT:      8      8
(062) CULVERT:                   N      N
(065) APPR. RDWY CONDITON:       6      6

******** APPRAISAL ********* CODE **** CHANGE ? ***
(067) STRUCTURAL EVALUATION:     2
(068) DECK GEOMETRY:             7
(069) UNDERCLEAR VERT/HORZ:      N
(071) WATERWAY ADEQUACY:         8      8
(072) APPR. RDWY ALIGNMENT:      4      8
(113) SCOUR CRITICAL BRIDGES:    6
(036) TRAFFIC SAFETY FEATURES: 0000
BR RAIL 0 TRANS 0 APPR GD 0 GD TERM 0

******** INSPECTION ********** INTERVAL **** DATE *
(090) LAST INSPECTION DATE:      24 MO.       12/92

(092,093) CRITICAL FEATURE INSPECT INTERVAL & DATE

     CFI DETAIL          CFI  CAT  INTERVAL   CFI DATE
  A) FRACTURE CRITICAL:  Y         48 MO.     00/00
  B) UNDERWATER INSP.:   Y    ___  48 MO.     00/00
  C) PIN CONNECTED:      N          0 MO.     00/00
  D) SNOOPER:            N          0 MO.     00/00

**************** FIELD INSPECTION ****************
INSPECTED BY: Bob Williamson

DATE INSPECTED: 1-10-95

****************** OFFICE REVIEW ******************
              - BRIDGE EVALUATION UNIT -
ENGINEERING REVIEW NECESSARY?  _____YES  __X__NO

REVIEWED BY:_____ DATE_____
```

7'6" clearance limitations added but actual superstructure restriction Keep at 19'5".

INSPECTOR: Edwin A. Toave Williamson

STRUCTURE NO: L15657002+0.600-1 Swan River (008) DATE: 1-10-95

Ahead on line

Lt of ℄, looking upstream

Back on line

Rt of ℄, looking downstream

S.I.& A. SUPPLEMENTAL FORM

(008)

STRUCTURE NO. L15 657 0024 0.600-1 FEATURE CROSSED Swan River

INSPECTED BY [illegible] TOANS DATE INSPECTED 1-10-95

CONDITION RATINGS

58. [*] DECK
- A. ___ CURBS
- B. * FLOORING/SLAB
- C. ___ GUARD ANGLES
- D. ___ JOINTS
- E. ___ MEDIAN
- F. 2 RAIL/BARRIER
- G. ___ SIDEWALKS
- H. * WEARING SURFACE
- I. * OTHER

59. [*] SUPERSTRUCTURE
- A. 6 BEARING DEVICES
- B. 5 BRACING
- C. ___ DRAINAGE
- D. * FLOORBEAMS
- E. ___ GIRDERS
- F. ___ PAINT
- G. * STRINGERS
- 5 H. * TRUSSES
- I. ___ UTILITIES
- J. ___ OTHER

60. [4] SUBSTRUCTURE
- A. 4 ABUTMENTS
- B. 4 BENTS/PIERS
- C. ___ BRACING
- D. 4 CAPS
- E. ___ COLUMNS
- F. 6 ENDFILLS
- G. * FOOTINGS/SILLS
- H. 6 ICE BREAKERS
- I. 6 PILES/POSTS
- J. 5 RETAINING WALLS
- K. ___ OTHER

61. [B] CHANNEL AND CHANNEL PROTECTION
- A. ___ CHANNEL LINING
- B. ___ DRIFT
- C. ___ LEVEES
- D. B RIP RAP/GABIONS
- E. * SCOUR/PIPING U.W.I.
- F. ___ SPUR DIKE
- G. B STREAM BANK
- H. B VEGETATION
- I. ___ OTHER

62. [N] CULVERT
- A. ___ DEPOSITION
- B. ___ EMBANKMENT
- C. ___ FOOTINGS
- D. ___ RAIL/BARRIER
- E. ___ INVERT
- F. ___ JOINTS/BOLTS
- G. ___ RETAINING WALLS
- H. ___ SHAPE
- I. ___ OTHER

65. [6] APPROACH ROADWAY CONDITION
- A. ___ APPROACH SLAB
- B. 6 EMBANKMENT
- C. = GUARDRAIL
- D. ___ JOINTS
- E. 6 SHOULDERS
- F. 6 SURFACE
- G. 6 TRANSITION
- H. ___ OTHER

APPRAISAL RATINGS

71. [8] WATERWAY ADEQUACY
- A. 8 ALIGNMENT
- B. 8 CAPACITY
- C. 8 FREEBOARD
- D. = PROFILE
- E. ___ OTHER

72. [3] APPROACH ROADWAY ALIGNMENT
- A. 6 HORIZONTAL CURVE
- B. 3 LATERAL CLEARANCE
- C. 8 LOAD POSTED
- D. 6 SIGNS/MARKERS
- E. 6 VERTICAL CURVE
- F. 6 VISIBILITY
- G. ___ OTHER

REMARKS: 58) Deck - snow & ice - prevents proper inspetion of timber planking. Rail is rotkd. Hanging 12x12 timbers @ 2'-6" clearance added to prevent overhight/weight loads. 59) Super - bearing appear satisfactory - debris and such all around truss ends. log stringers in Span 1, 2 - 4; 5 are rotkd. Vertial Tens. Lt. U_1-L_1 - added cable to strengthen. U_1-L_2 Rt. inside and outside bent. U_4 L_5 Lt counter bent. L_5-U_6 Rt inside, bent. L_5-U_6 Lt outside - not functional - L_6-U_7 Lt inside Bent. L_7-U_7 Lt inside and outside - bent. Apparent collision damage. floorbeams & stringers need inspected from boat. Moderate corrosion and failing coating throughout steel section. 60) Sub - timber piles are rotting - P2; 5. Concrete piers 3; 4 show heavy deterioration - extending up to and around bearings. Timber Cap @ B-1 is rotkd and crushing. Ice prevents inspection of anything under water. Retaining walls at both ends are failing. 65) Appr. Cond - no appr. rail. 72) Appr. Align. - single lane bridge

PRIORITY	MAINTENANCE ACTIVITY NUMBERS	MAINTENANCE RECOMMENDATIONS (FEDERAL-AID - STATE MAINTAINED ONLY)	MAINTENANCE FORCES: REPAIRS COMPLETED BY:	MAINTENANCE FORCES: DATE

SUPPLEMENTAL INSTRUCTIONS

Evaluate and describe items S8-62, 65, 71 and 72 based on the guidelines listed below and in the Inspector's Manual. Condition codes are used to describe the existing, in place bridge in comparison to its as built condition. Codes in th Appraisal Section are used to evaluate the bridge in relation to the level of service it provides to the highway system of which it is part. Maintenance items, listed alphabetically, do not necessarily affect the overall rating given to th major components. Where sketches and narrative descriptions cannot fully describe the deficiency, extra photos should b taken.

Code	Condition
N	NOT APPLICABLE
9	EXCELLENT CONDITION
8	VERY GOOD CONDITION - no problems noted.
7	GOOD CONDITION - some minor problems.
6	SATISFACTORY CONDITION - structural elements show some minor deterioration.
5	FAIR CONDITION - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.
4	POOR CONDITION - advanced section loss, deterioration, spalling or scour.
3	SERIOUS CONDITION - loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.
2	CRITICAL CONDITION - advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.
1	"IMMINENT" FAILURE CONDITION - major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put back in light service.
0	FAILED CONDITION - out of service - beyond correction action.

Code	Appraisal
N	Not applicable
9	Superior to present desirable criteria
8	Equal to present desirable criteria
7	Better than present minimum criteria
6	Equal to present minimum criteria
5	Somewhat better than minimum adequacy to tolerate being left in place as is
4	Meets minimum tolerable limits to be left in place as is
3	Basically intolerable requiring high priority of corrective action
2	Basically intolerable requiring high priority of replacement
1	This value of rating code not used
0	Bridge closed

MAINTENANCE PRIORITIES

The inspector is to enter the letters "C," "P" or "R" under the priority column that best describes the structure's maintenance priority. The inspector shall use his or her best judgment of the condition using these guidelines.

CRITICAL: Requires the immediate attention of maintenance personnel because the structure's integrity is questionable. The Bridge Maintenance Manager in Helena is to be notified by the Division Maintenance Chiefs. When corrective action has been taken under this priority, the supervisor in charge should complete the bottom portion of this form and attach to Form MMS-97 for return to the Maintenance Administrator.

A. Fractured stringers, girders or beams.
B. Prestressed beams - exposed strands need painting.
C. Fractured or severely misaligned truss members.
D. Timber structure with broken piles, severely crushed c
E. Holes in deck or spalls and delaminated in excess of 1
F. Anything unusual (changes, separations, misalignments)

PREVENTATIVE: Should be attended to in a timely manner to prevent the condition from becoming critical. When corrective action has been taken under this priority, the supervisor in charge should complete the bottom portion of this form and attach to Form MMS-97 for return to the Maintenance Administrator.

A. End fills sloughing (depending on extent, could be critical).
B. Spalls and delamination of deck between 5% and 10%.
C. Structural steel and/or bridge rail needs painting.

ROUTINE: Regular items of maintenance needing attention.

A. Drains and/or joints need cleaning.
B. Clean around shoes.
C. Removal of drift and debris from around piers

ACTIVITY CODE DESCRIPTIONS

The inspector should enter the activity code which best describes their maintenance recommendations. If the appropriate number is unknown, leave blank for maintenance persons to complete. An activity code is unnecessary for routine maintenance. The 4000 series is specifically for bridges, but other codes may also apply. A complete list of activity codes can be found in the Bridge Inspection and Maintenance Manuals.

4101 Structure Painting
4102 Repair Timber Structures
4103 Concrete Bridge Deck Repair
4104 Repair or Replace Structural Steel
4105 Substructure Concrete Repair
4106 Expansion Joint Repair
4107 Bridge Curb and Railing Repair
4108 Emergency Bridge Repairs
4109 Structure Leveling
4301 Betterment Work - Bridge Structure

Distribution: After inspection submit white original to the Bridge Bureau, pink copy to the Division Maintenance Office or local authority (e.g., county, city) and yellow copy for the Division Inspection files.

Appendix H: Programmatic Agreement on Historic Roads & Bridges

May 9, 1989

PROGRAMMATIC AGREEMENT

Among the Federal Highway Administration (FHWA), the Montana State Historic Preservation Office (MSHPO), and the Advisory Council on Historic Preservation (ACHP), to develop a historic preservation plan to establish processes for integrating the preservation and use of historic roads and bridges with the mission and programs of the FHWA in a manner appropriate to the nature of the historic properties involved, the nature of the roads and bridges in Montana, and the nature of FHWA's mission to provide safe, durable and economical transportation.

WHEREAS, Congress has mandated that highway bridges be evaluated, and where found substandard, be rehabilitated or replaced and has provided funding for these purposes, to insure the safety of the traveling public (through the Highway Bridge Replacement and Rehabilitation Program); and

WHEREAS, the American Association of State Highway and Transportation Officials (AASHTO) has standards regulating the construction and the rehabilitation of highways and bridges that must be met by the FHWA to insure the safety of the traveling public; and

WHEREAS, Congress declares it to be in the national interest to encourage the rehabilitation, reuse and preservation of bridges significant in American history, architecture, engineering and culture; and

WHEREAS, the FHWA proposes to make Federal funding available to the Montana Department of Highways (MDOH) for its ongoing program to construct and rehabilitate roads and bridges, and MDOH concurs in and accepts responsibilities for compliance with this Agreement; and

WHEREAS, the FHWA has determined that the construction and improvement of highways may have an effect on historic roads and bridges that are listed in the National Register of Historic Places, or may be determined eligible for listing, and have consulted with the ACHP and the MSHPO pursuant to Section 800.13 of the regulations (36CFR800) implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the parties understand that not all historic roads and bridges fall under the jurisdiction or sphere of influence of the FHWA, and that to encourage other parties to participate in preservation efforts, an education to foster a preservation ethic is needed; and

NOW THEREFORE, FHWA, MSHPO, and ACHP agree, and MDOH concurs, that the following program to enhance the preservation potential of historic roads and bridges, and to promote management and public understanding of and appreciation for these cultural resources will be enacted in lieu of regular Section 106 procedures as applied to historic roads and bridges only.

Stipulations

The Federal Highway Administration will ensure that the following program is carried out:

The Federal Highway Administration, in cooperation with the Montana Department of Highways, will develop a preservation plan to ensure the preservation and rehabilitation of the states significant historic roads and bridges, and will develop an on-going educational program to interpret significant historic roads and bridges that illustrate the engineering, economic, and political development of roads in Montana. Specifically:

A. For Public Education

1. MDOH will prepare technical documentation of the history of roads and road construction, and of the history of bridge building in the state, according to a format developed by MDOH in consultation with the MSHPO and in compliance with the Secretary of the Interior's Standards for Preservation Planning. From this documentation MDOH will prepare narrative histories suitable for publication for the general public. Draft copies of the documentation and the narrative histories will be submitted to the FHWA, MSHPO and a list of qualified reviewers to be determined by FHWA, MDOH and MSHPO by December 1, 1990, and 45 days will be allowed for reviewers to comment. MDOH will prepare final documentation and histories by May 1, 1991. Final copies will be distributed to the district, area, and field offices of the MDOH, to the County Commissioners, county road and bridge departments, and county historical societies, to the owners of significant roads and bridges identified in the documentation, to the Montana Historical Society Library and the Montana State Library, and to the general public as requested.

2. MDOH will develop and make available to newspapers and publishers of historical and of engineering journals articles suitable for public information on historic roads and bridges and on their construction and continued significance.

3. MDOH will augment its historic sign program by developing interpretation for the traveling public at existing rest areas or pull-overs to explain Montana's road construction and bridge engineering. It will develop on-site interpretation for significant resources that can be viewed and appreciated by the public.

4. By April 15, 1990 MDOH will develop and circulate a traveling exhibit that portrays the history of the development of transportation in Montana.

5. By December 1, 1991 MDOH will develop and circulate a public program (slide/tape or video) of approximately 20 minutes, suitable for use at public or organization gatherings, classrooms, etc.

B. For Historic Road and Bridge Preservation

1. The FHWA, in co-operation with the MDOH, will prepare a plan for the preservation of significant and representative road segments and bridge types around the state as identified in the research in part A. of this Agreement. The Historic Preservation Plan (HPP) will be presented to the FHWA, MSHPO, the ACHP and list of qualified reviewers by September 1, 1991, and 45 days comment period will be

allowed for discussion and adoption. FHWA will work to resolve disagreement on the proposed HPP. If agreement cannot be reached by December 1, 1991, all FHWA undertakings affecting historic roads and bridges will again become subject to 36 CFR 800 procedures.

The HPP for historic roads and bridges shall be prepared in accordance with the following guidelines:

a. The essential purpose of the HPP will be to establish processes for integrating the preservation and use of historic roads and bridges with the mission and programs of the FHWA and the MDOH in a manner appropriate to the nature of the historic properties involved, the nature of the roads and bridges in Montana, and the nature of FHWA's mission, to provide safe, durable and economical transportation;

b. In order to facilitate such integration, the HPP, including all maps and graphics, will be made consistent with the Federal Aid road and bridge numbering systems;

c. The HPP will be prepared in consultation with the owners, managers, caretakers, or administrators of historic roads and bridges, including county governments, city governments, federal agencies, and private individuals or corporations, and with interested parties or organizations, including the American Society of Civil Engineers - Montana Section, and the Montana Society of Engineers;

d. The HPP will be prepared with reference to the Secretary of Interior's Standards and Guidelines for Preservation Planning (48 FR 44716-20); and

e. The HPP will be prepared by or under the supervision of an individual who meets, or individuals who meet, at a minimum, the "professional qualifications standards" for historian and archaeologist in the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-9).

2. The contents of the HPP will be developed in conjunction with the MSHPO, and will include, but not be limited to, a schedule for the anticipated implementation of the various elements, plus the formulation and presentation of programs to:

a. Preserve historic bridges that do not meet safety rating standards by rehabilitation in a manner that would preserve important historic features while meeting as many AASHTO standards as can be reasonably met;

b. When a historic bridge must be replaced, give full consideration and demolition savings to reuse of the historic bridge in place by another party.

c. When a historic bridge must be replaced and in place preservation is not feasible, give full consideration and

financial assistance to relocating and rehabilitating the historic bridge as a part of the replacement project;

d. Develop and implement a program to encourage relocation and reuse of bridges of historic age that cannot be preserved in place or used on another location by the state or county;

e. Provide a financial incentive by offering demolition savings on all relocation and reuse of bridges of historic age;

f. Develop a list of historic roads and bridges that can be preserved. The list should include the variety available to reflect Montana highway construction history, while considering current condition and use. The list should be presented to and discussed with managing units to solicit their cooperation and/or participation in the preparation of the HPP; and

g. Devise a program to pursue the preservation of the state's representative and outstanding examples of road and bridge technology. A list of historic roads and bridges that shall be preserved will be developed to implement this program, given currently known commitments to do so by property managers and subject to change by obtaining future commitments for other properties covered by this Agreement.

3. The HPP will not include information developed in Part A. above, narrative histories, but will be guided by and used in conjunction with Part A. above, and will be distributed to the same parties.

4. MDOH will prepare a report annually on its implementation of the HPP, and provide this report to the FHWA, the SHPO, and the ACHP for review, comment, and consultation as needed.

C. Other Legal and Administrative Concerns

1. FHWA will continue to inventory, evaluate, seek determinations of eligibility, and fully comply with 36 CFR 800 for all undertakings with the potential to affect historic properties besides roads and bridges which are hereby excluded from such consideration.

2. The MSHPO, and the ACHP may monitor FHWA and MDOH activities to carry out this PA, by notifying FHWA in writing of their concerns and requesting such information as necessary to permit either or both MSHPO and ACHP to monitor the compliance with the terms of this Agreement. FHWA will cooperate with the SHPO, and the ACHP in carrying out their monitoring and review responsibilities.

3. FHWA will carry out the existing MOA's to preserve or record historic bridges that are now scheduled for replacement.

4. If a dispute arises regarding implementation of this PA, FHWA will consult with the objecting party to resolve the dispute. If any consulting party determines that the dispute cannot be resolved, FHWA will request further comments of the ACHP.

5. During any resolution of disagreements on the PA, and/or in the event MDOH does not carry out the terms of the PA, FHWA will carry out the procedures outlined in 36 CFR 800 for all undertakings otherwise covered by the agreement.

Execution of this PA evidences that FHWA has afforded the ACHP a reasonable opportunity to comment on FHWA's program to construct and improve Montana highways when those undertakings affect historic roads and bridges, and that FHWA has taken into account the effects of these undertakings on significant historic roads and bridges.

BY: FEDERAL HIGHWAY ADMINISTRATION

Roger K. Scott — 5-11-89
Roger K. Scott, Division Administrator — Date

BY: MONTANA STATE HISTORIC PRESERVATION OFFICER

Marcella Sherfy, MSHPO — 5-11-89
Date

BY: ADVISORY COUNCIL ON HISTORIC PRESERVATION

Robert D. Bush — 6-1-89
Executive Director — Date

CONCUR
BY: MONTANA DEPARTMENT OF HIGHWAYS

Stephen C. Kologi — May 11, 1989
Stephen Kologi, P.E., Chief — Date
Preconstruction Bureau

EV:1:by:cm:255/cc-5

cc

Amendment To The Programmatic Agreement Regarding Historic Roads and Bridges In Montana.

We are hereby amending the following stipulations in the Programmatic Agreement.

A. For Public Education

1. In the third sentence December 1, 1990 becomes December 1, 1992. In the fourth sentence, May 1, 1991 becomes May 1, 1993.

5. December 1, 1991 becomes December 1, 1993.

B. For Historic Road and Bridge Preservation

1. September 1, 1991 becomes September 1, 1993 and December 1, 1991 becomes December 1, 1993.

By: Federal Highway Administration

for D C Lewis

for Hank Honeywell, Division Administrator DATE 02-27-92

By: Montana State Historic Preservation Officer

Marcella Sherfy

Marcella Sherfy, Montana State Historic Preservation Officer DATE 2-27-92

By: Advisory Council On Historic Preservation

Robert D. Bush

Robert D. Bush, Executive Director DATE 3-16-92

By: Montana Department of Transportation

Edrie Vinson

Edrie Vinson, Environmental and Hazardous Waste Bureau DATE Feb 25, 1992

Appendix I: Article 107.12 ENVIRONMENTAL PROTECTION
(from Montana Supplemental Specifications)

Rev. 6-1-91
Article 107.12 ENVIRONMENTAL PROTECTION. Page 56 5-1-89

Rescind and replace with the following:

107.12 ENVIRONMENTAL PROTECTION.

(A) General. The Contractor shall comply with all laws and regulations of the Department of Health and Environmental Sciences and with all other federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take precautions to prevent pollution of streams, lakes, ponds, reservoirs, and wetlands with silt, fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

The Contractor shall furnish the Engineer copies of all authorizations and/or permits obtained.

All required permits shall be secured before commencing activities for which permits are required.

(B) Water Pollution and Siltation Regulations. The Contractor's attention is directed to Title 75, Chapter 5, MCA, (Water Quality) and subsequent administrative rules of the Water Quality Bureau, Department of Health and Environmental Sciences.

Under the Water Pollution Control Act, Construction Dewatering - General Discharge Permits and Short-Term Construction Authorizations are required for construction activities that may result in violation of water quality standards of streams, lakes, or other bodies of water located on or adjacent to the project.

Under the Federal Water Pollution Control Act, as administered by the U.S. Army Corps of Engineers, Permits Branch, P.O. Box 5, Omaha NE 68101, section 404 Permits are required for discharging dredged or fill material into wetlands or waters under the jurisdiction of the Corps. Information relative to Section 404 permits may be obtained from the Corps offices in Helena (406-444-6670) and Billings (406-657-6891).

Other requirements relating to water pollution control are set forth in Section 208 of these specifications.

(1) Construction Dewatering - General Discharge Permits. The Contractor shall obtain a Construction Dewatering - General Discharge Permit from the Water Quality Bureau, Department of Health and Environmental Sciences in Helena prior to dewatering any cofferdam or other excavation. Copies of the permit are available from the Water Quality Bureau. A permit is valid for a project only when accompanied by an authorization letter.

Work authorized by a Construction Dewatering - General Discharge Permit will not be permitted to begin until the Contractor has furnished the Engineer with an executed copy of the authorization letter.

In order to comply with the terms of the General Discharge Permit, the Contractor may be required to treat wastewater by pumping the water to retention ponds for clarification or provide other approved treatment.

(2) Short-Term Construction Authorization. The Contractor will be required to secure all Short-Term Construction Authorizations, under ARM 16-20.633(3a), for operations involving activities or improvements, whether or not shown on the plans, that would violate the Montana Water Quality Standards.

Forms for "Application For Authorization" for short-term construction activities may be obtained from the Water Quality Bureau, Department of Health and Environmental Sciences in Helena.

Applications for Authorization require the following information to be furnished.

(a) A detailed description of all construction activities that may result in stream sedimentation and/or turbidity (e.g., riprapping, instream work with equipment, dredging, channeling, excavating).

(b) A list of the type of equipment planned for use to accomplish the work described in (a) above and a discussion of how the equipment will be used in conjunction with the project.

(c) The date construction activity is anticipated to commence.

(d) The estimated completion date.

(e) A discussion of the alternatives considered and/or available for minimizing or eliminating stream sedimentation as a result of constructing the project.

(f) A location map and plan and elevation drawings describing stream channel and project in the vicinity of the construction activity. Include photographs if possible.

(3) Section 404 - Nationwide and Individual Permits. The Contractor's attention is directed to the Federal Water Pollution Control Act (current amendments). The Contractor shall comply with the provisions of this act, with special attention directed to Section 404.

Construction activities in and around wetlands or waterways may be covered by a U.S. Army Corps of Engineers' Nationwide Permit or may require an individual Section 404 Permit. The Contractor shall be responsible for obtaining all permits necessary for activities that facilitate construction and are not covered by a Section 404 Permit already obtained by the Department. These activities may include, but are not limited to, temporary fills and berms, haul roads, work bridges, and the like, which require fill below the ordinary high-water limits of streams, wetlands, lakes, or other water bodies under the jurisdiction of the Corps.

The special provisions will include any additional conditions and requirements for applicable Section 404 permits.

(C) Air Quality. All equipment including, but not limited to, hot-mix paving plants and aggregate crushers shall be operated to comply with the minimum air quality standards established by federal, state, and local agencies.

No additional payment will be made to the Contractor for the use or installation of dust or smoke control devices, for the disruption of work or loss of time occasioned by the installation of such control devices, or for any other related reasons.

(D) Noise Pollution. The Contractor shall comply with all applicable laws and regulations and with all requirements contained in the special provisions regarding noise pollution.

The special provisions may include additional requirements for projects located in or near urban areas.

(E) Noxious Weed Management. The Contractor shall comply with the pertinent requirements of the County Noxious Weed Management Act, Title 7, Chapter 22, Sections 7-22-2101 through 7-22-2153, and all county and contract noxious weed control requirements. The Contractor shall determine the specific noxious weed control requirements not specified in the Contract of each county within which the project is located prior to submission of bids.

Payment for all costs incurred in complying with weed control requirements will be included in payment for other items of the Contract.

(F) Archeological and Historical Findings. Attention is directed to Article 107.23 regarding the protection of archeological and historical findings.

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."